



U.S. Department of
Transportation

Status of Traffic Mitigation Ordinances

August 1989



An appendix volume for this study includes the texts of the ordinances discussed in this main report. The appendix volume is available from the National Technical Information Service, Springfield, Virginia 22161. At this writing the appendix volume costs \$39.00 plus \$3.00 handling fee. Please note its document accession number, PB 90-164351/AS when ordering.

Status of Traffic Mitigation Ordinances

Final Report
August 1989

Prepared by
Peat Marwick Main & Co.
8150 Leesburg Pike, Suite 800
Vienna, VA 22180

In Association with
R.L. Oram Associates

Prepared for
Urban Mass Transportation Administration
U.S. Department of Transportation
Washington, D.C. 20590

Distributed in Cooperation with
Technology Sharing Program
Research and Special Programs Administration
U.S. Department of Transportation
Washington, D.C. 20590

DOT-T-90-06

PREFACE

This report discusses the emergence and status of traffic mitigation ordinances as a strategy for reducing automobile congestion related to commuting. It is based on a review of traffic mitigation ordinances drafted or adopted in 20 selected local jurisdictions throughout the United States as of December 1988.

The Urban Mass Transportation Administration (UMTA) is publishing this report as a resource for local governments which may be contemplating the development of a traffic mitigation ordinance to address their traffic congestion problems. The report, by presenting and discussing the major components of traffic mitigation ordinances, assists local jurisdictions in developing an ordinance.

The concept of traffic mitigation ordinances is relatively new; ordinances have generally not been in effect long enough to collect conclusive evidence of their results. Thus, the degree to which traffic mitigation ordinances are actually successful in reducing traffic congestion is as yet unproven.

UMTA does not endorse the development of traffic mitigation ordinances as the sole solution to traffic congestion. It is one method that may have merit as part of a broad-based transportation and land use strategy including transportation system development, transportation systems management, growth management policies, zoning, and other transportation demand management approaches.

TABLE OF CONTENTS

I. Emergence of Traffic Mitigation Ordinances	
TSM Initiative	I.1
Expanded Role of Private Sector	I.2
Transportation Brokerage	I.2
Transportation Management Associations	I.2
Impacts of New Development	I.3
Role of Public Sector	I.4
1984 Olympics in Los Angeles	I.4
Summary	I.4
II. Traffic Mitigation Ordinance Approach and Application	
Traffic Management Strategies	II.2
TDM Approaches	II.3
Goals	II.3
Scope	II.10
Geographic Coverage	II.13
Ordinance Requirements	II.14
Program Management	II.17
Funding	II.20
Enforcement	II.21
Results	II.22
Ordinance Development	II.23
Regional Approach	II.24
State Role	II.25
III. Traffic Mitigation Ordinances: Directions and Prospects	
Perspective	III.1
Applicability	III.2
Regional Approach	III.2
State Role	III.3
Supply Side and Financing	III.3
Market Research	III.4
Linkage to Other Planning and Land Use Issues	III.4
Innovative Program Development	III.5
Transitional Role of Developers	III.5
Recommendations to UMTA	III.5
IV. Case Studies	
Alexandria, VA	IV.2
Bellevue, WA - CBD	IV.6
Bellevue, WA - non-CBD	IV.9
Berkeley, CA	IV.13
Concord, CA	IV.17
Contra Costa County, CA - county-wide	IV.22
Contra Costa County, CA - Pleasant Hill BART Station Area	IV.28
El Segundo, CA	IV.33
Golden Triangle Area, Santa Clara County, CA	IV.38
Maricopa County, AZ	IV.42

TABLE OF CONTENTS (Continued)

Montgomery County, MD	IV.47
North Brunswick, NJ	IV.51
Oxnard, CA	IV.57
Pasadena, CA	IV.62
Pima County, AZ	IV.67
Placer County, CA	IV.72
Pleasanton, CA	IV.75
Sacramento, CA - developer	IV.80
Sacramento, CA - employer	IV.84
San Buenaventura, CA	IV.87
San Rafael, CA	IV.92
Seattle, WA - CBD	IV.95
Seattle, WA - major institutions	IV.99
South Coast Air Quality Management District, Los Angeles, CA	IV.103

V. References

I. EMERGENCE OF TRAFFIC MITIGATION ORDINANCES

Transportation demand management (TDM) ordinances, also referred to as transportation system management (TSM) or traffic mitigation ordinances, have emerged as a compelling new strategy for reducing automobile congestion related to commuting. The approach is an outgrowth of a range of initiatives, pressures, and precedents affecting urban transportation over the past 15 years.

TSM INITIATIVE

The initial concept of transportation system management can be traced to a joint Urban Mass Transportation Administration (UMTA) and Federal Highway Administration (FHWA) policy promulgated in September 1975. This initiative changed the metropolitan transportation planning process to require development of a short-range, low-capital, management-oriented strategy as a companion to the more traditional long-range transportation planning products. A "TSM Element", to be updated annually, became a new requirement of the Transportation Improvement Plan that each metropolitan region is required to develop in order to be eligible for federally-funded transportation programs. Initially, this requirement was addressed by the metropolitan planning organizations (MPOs).

Some viewed the TSM requirement as a response to the continually increasing limitations on federal funding available for new transportation projects. TSM emphasized maximizing the use of existing facilities. UMTA and FHWA underscored the TSM process by formal and informal measures, such as requiring special integration of TSM actions as part of new federal transit investment decisions, and by initiating substantial new demonstration and technical assistance programs.

TSM-related demonstrations included measures designed to 1) improve the capacity of the existing transportation system such as preferential freeway and arterial lanes for high occupancy vehicles and traffic signaling improvements, and 2) change demand on the existing transportation system such as area-wide and employer-based ridesharing programs, transportation brokerage, and other innovative management strategies. A key finding from many of the projects was the influence that employers had on the success of alternative commute programs through measures such as providing free parking and/or comparable incentives for people who use transit or ridesharing, offering flextime, and appointing employee transportation coordinators.

While defined as a public sector planning requirement, TSM became a means of pursuing near-term action on persistent traffic congestion, taking a management rather than a facilities approach. It stressed coordination and interagency activities and, by emphasizing carpooling and staggered work hour strategies, involved the business community. TSM also became a response to the gasoline shortages of 1973 and 1979 and to continuing concern for air quality.

EXPANDED ROLE OF PRIVATE SECTOR

The role of the private sector in transportation began to expand as the Reagan Administration's policies were implemented. Initial efforts focused on expanding the role of private bus operators, in part stimulated by growing awareness of the high cost of peak period bus services, especially those provided by the public sector. Greater appreciation of transit's economic constraints supported both increased use of private operators and recognition that continuing to pursue the peak hour commuter market was not a cost-effective strategy for transit. This recognition added impetus to the need to better manage peak hour traffic levels. It became clear that reducing demand would be far more cost-effective than increasing supply. This concept continues to have particular appeal for the deficit-constrained budgets of the 1980's.

In addition to the role of private bus operators, the importance of developers, employers and even retailers became increasingly prominent in transportation initiatives. The private sector was increasingly seen as a financing resource, service provider and basic "market shaper" whose involvement should be featured rather than considered peripherally or addressed as an after-thought.

TRANSPORTATION BROKERAGE

Transportation brokerage, another Federally-created transportation concept, while not having the intended effects, non-the-less stimulated interest in TDM. Brokerage sought to develop whatever service modes were required to meet identified needs, and was hoped to generate a new model for a more "market-based" transit organization. Brokerage stressed the idea of market niches and multiple services, and tended to champion paratransit and ridesharing services. Working flexibly, ridesharing brokerages took advantage of interests and opportunities to reduce traffic by working with employers and developers on a case by case basis.

As interest in ridesharing has stabilized or in some cases diminished in the 1980s, many brokerages have shifted their attention from solely providing ridesharing services to attempting more directly to influence traffic demand. The effects of the brokerage mentality can also be seen in ordinances that rely on a menu of options for compliance, which again reflects flexibility. The maturing of the brokerage concept and ridesharing profession has spawned the Association for Commuter Transportation (ACT), a very active national organization working to build support for TDM strategies.

TRANSPORTATION MANAGEMENT ASSOCIATIONS

By the mid-1980s, the concept of the Transportation Management Association (TMA) emerged as a new mechanism for enhancing the level of corporate involvement in urban transportation issues, and specifically urban traffic congestion. TMAs pursue a cooperative, consensus-based strategy that seeks to gain a common view of the causes of traffic congestion and arrive at joint solutions. TMAs recognize that any single employer's actions to reduce traffic may have relatively little impact on congestion while still entailing significant costs to the company, but that more comprehensive actions by the

entire business community can have significant impacts while costs are shared more equitably. Benefits of traffic congestion relief are generally shared among the entire community and only become appreciable when a "critical mass" of employers are involved. Developing a TMA has become one of the few attractive options to suburban areas where few other traffic initiatives are seen to be viable.

While TMAs are now quite popular, some communities have noted their weaknesses which include the rather involved process of developing the TMA, dependence on leadership personalities, and the fact that they tend not to sustain themselves over time. Yet TMAs are accepted as a vital "stepping stone" to bring all of the key parties in urban transportation together toward enhanced cooperation. While focused more on the private sector, this is very reflective of the original intent of the TSM policy.

TDM ordinances, in some cases, have emerged as a way to pursue the same ends as a TMA -- widespread congestion relief-- without dependence on leadership and with a regulatory structure that affirms the continuation of the process. In essence, TDM ordinances try to achieve summarily what TMAs have tried to encourage voluntarily. Many ordinances, in fact, can be traced to a "Task Force" or other TMA-type endeavor that generated common understanding of the problems and thereby successfully garnered support for the ordinance strategy from the business community.

IMPACTS OF NEW DEVELOPMENT

Another direction leading to the traffic ordinance concept has been the desire by many communities to mitigate the rapidly growing traffic levels and, specifically, the anticipated traffic impacts of new developments. In general, factors associated with growing suburban traffic congestion include the increased suburbanization of employment, the increasing number of jobs overall, the increasing number of women in the workforce (women tend to work closer to home than do men), and the inability to construct new highways and expand transit services to keep pace with the growing demands. Suburban congestion, now common, has become a particular and often highly politicized concern in the municipalities where new development is occurring fastest. While some point to the ordinances as a very aggressive or even radical approach, "no growth" movements are an even more extreme reaction to the traffic congestion problem.

In the case of new developments, the intent to have the "best of both" is often observed, i.e., to let development proceed while attempting to reduce the projected traffic levels. New developers have faced a variety of conditions placed on project approvals, such as the ability to provide less parking, requirements to develop traffic mitigation plans, or meet specifically-imposed standards for the amount of traffic to be generated. Development impact fees have also become quite prominent in recent years. Developers have generally accepted such conditional approvals, though the process has in many cases illustrated that attempting to improve or even maintain traffic conditions by simply focusing on new developments is inadequate.

The first areawide employer TDM ordinance, adopted in Pleasanton, California, in 1984, can be directly traced to municipal deliberations with the developers

of a major new suburban business park. Faced with traffic mitigation approval conditions, the developers argued successfully that in order for the process to succeed, the same standards and requirements should be imposed on all employers, not just the developer or the employers residing in the new development. Developers may be reluctant to incorporate transportation management conditions that have to be reflected in leases they have with tenants, especially if the conditions result in a competitive disadvantage for locating at the site. Attention generated by the landmark Pleasanton ordinance, and the apparent success being achieved there, is now itself another key stimulus for replicating ordinance initiatives.

ROLE OF PUBLIC SECTOR

A growing appreciation of the appropriate role of the public sector, and specifically its limitations, has impacted TDM. A subelement here is the recognition of where public transit works well and where it doesn't, and the limited role transit can play in suburban traffic issues in particular. The desire to limit public funding increases, both at the federal and local level, is also a factor supporting the emergence of the transportation management strategy. Relative to the growth in the 1970s, federal funding has declined substantially in transportation, and many localities, notably in California due to the impacts of Proposition 13, have also been constrained from raising local taxes even when this is desired.

1984 OLYMPICS IN LOS ANGELES

The transportation strategies put in place during the Los Angeles Olympics in 1984 had a notable effect on the emergence of the areawide Regulation XV adopted by the South Coast Air Quality Management District and now being introduced in the four-county Los Angeles region. While the city feared regional gridlock would result from the major increase in traffic that the Olympics would bring, the mitigation measures introduced cooperatively with the business community --with emphasis on short-term ridesharing and flextime -- made the actual traffic conditions experienced better than normal. The need and means for sustaining these achievements in transportation efficiency on a regular basis received substantial attention by the City of Los Angeles and other parties.

SUMMARY

The emergence of the TDM ordinance is thus well-rooted in a range of transportation policies, activities and insights, which have pursued more cautiously and voluntarily the same ends that the ordinances are now trying to mandate. There is promise that this new focus on the fundamental factors that actually define traffic levels can have substantial impact. The emergence of these new methods -- ordinances and related actions -- are also based in part on the very limited impacts of the earlier voluntary efforts in actually reducing the magnitude of the traffic problems. Yet, traffic ordinances can be very controversial. How to best obtain business community support for traffic mitigation activities will remain a major issue of debate in many communities.

II. TRAFFIC MITIGATION ORDINANCE APPROACH AND APPLICATION

This section of the report discusses some of the major components of traffic mitigation ordinances as well as important issues in the development and application of ordinances as a means of reducing traffic congestion. This review of traffic mitigation ordinances was limited; an exhaustive research of all ordinances currently adopted or in draft was not conducted. The traffic mitigation ordinances of the following jurisdictions were reviewed during this study:

- Alexandria, Virginia, adopted May 1987
- Bellevue, Washington
 - Non-CBD Ordinance, adopted May 1987
 - Interim Traffic Ordinance (CBD), adopted September, 1988
- Berkeley, California, in draft
- Concord, California, adopted October 1985, revised 1987
- Contra Costa County, California
 - Pleasant Hill BART Station Area ordinance, adopted June 1986
 - County-wide ordinance, adopted October 1987
- El Segundo, California, adopted November 1985
- Golden Triangle Area, Santa Clara County, California, model ordinance in draft
- Maricopa County, Arizona, to become effective December 31, 1988
- Montgomery County, Maryland, adopted November 1987
- North Brunswick, New Jersey, adopted October 1987
- Oxnard, California, in draft
- Pasadena, California, adopted June 1986
- Pima County, Arizona, intergovernmental agreement adopted in April 1988, ordinances adopted in 5 jurisdictions in April and May 1988
- Placer County, California, adopted May 1982
- Pleasanton, California, adopted October 1984
- Sacramento, California
 - employer ordinance in draft
 - developer ordinance in draft

- San Buenaventura, California, adopted July 1988
- San Rafael, California, adopted July 1983
- Seattle, Washington
 - Major Institutions ordinance adopted 1983
 - Land Use Code revised in 1985
- South Coast Air Quality Management District, Los Angeles, California, Regulation XV adopted December 1987 and implemented July 1988

Summaries of each of these ordinances are included in Section IV of this report. Copies of the ordinances are included in the appendix under separate cover.

The major components of the traffic mitigation ordinances reviewed are discussed below.

TRAFFIC MANAGEMENT STRATEGIES

Historically, there have been three general strategies for dealing with traffic congestion problems:

- Transportation Facility and Development (TFD). This strategy involves planning and decision-making for developing new highway systems or new transit services or equipment. An example of TFD is new on/off ramps to a freeway.
- Transportation System Management (TSM). Following this strategy, adjustments are made to the existing transportation system to allow traffic to flow better. TSM adjustments improve the capacity of the system. Examples of TSM adjustments include improved signalization, change in direction of flow of traffic in one or more lanes, establishment of high occupancy vehicle lanes, and removal of on-street parking during peak hours.
- Transportation Demand Management (TDM). Using this strategy, programs are developed and/or facilities constructed in order to change demand on the system. TDM measures reduce traffic congestion by changing user behavior. TDM programs include information and incentives to encourage employees to travel by means other than the single occupant vehicle during peak travel periods. TDM facilities are constructed to complement TDM programs. Examples of TDM measures include flexible work hours, ridesharing, and preferential parking for vanpools. Examples of TDM facilities include car and vanpool staging areas, transit shelters, bicycle lockers, and showers.

In most cases, no single approach can solve the traffic congestion problems of a jurisdiction. Each of these three strategies should be considered and used appropriately by local jurisdictions within a broader transportation and land use strategy including growth management policies and zoning to provide development patterns that will help reduce overall automobile use.

TDM APPROACHES

A number of approaches are currently being used to reduce traffic congestion by changing user behavior. One way to classify these approaches is by the extent to which they are voluntary or mandatory, as follows:

- Voluntary. Employers or developers decide to start a TDM program voluntarily, frequently in the form of a Transportation Management Association (TMA).
- Incentive. A local ordinance is adopted which offers benefits to developers to encourage TDM program implementation. For example, developers may be allowed to reduce the amount of parking that must be provided in return for commitment to implement a TDM program.
- Voluntary/Mandatory. A voluntary TDM program is initiated which becomes mandatory if agreed upon rates of progress in reduction of traffic congestion do not take place. Typically an ordinance is adopted at the start of the voluntary phase and mandatory compliance is triggered by progress rates. An example of this approach is the model transportation ordinance being developed by the Golden Triangle Task Force in Santa Clara County, California.
- Mandatory. A TDM program is required by local ordinance or administrative guidelines. The mandatory approach may involve the following:
 - Developer conditions. Through the development review process, the ordinance establishes specific demand management strategies as conditions for approval of development permits (e.g., Bellevue, WA and Contra Costa County, CA). TDM requirements may be recorded as conditions, covenants and restrictions on subsequent use of the property and included in lease agreements.
 - Employer requirements. The ordinance requires employers meeting specified criteria to implement TDM programs to achieve desired levels of use of commute alternatives among employees (e.g., Placer County, CA and Contra Costa County, CA) or to reduce vehicle trips by a certain percentage as compared to a specified baseline (e.g., City of Pleasanton, CA)

This report focuses on mandatory TDM approaches, specifically local ordinances requiring TDM measures to reduce traffic congestion. It should be noted, however, that many of the ordinances reviewed contain voluntary components for certain size employers and development categories.

GOALS

Exhibit 1 presents the goals established for the ordinances reviewed. TDM ordinances typically set a goal or standard that employers or developers must

EXHIBIT 1: ORDINANCE GOALS

ORDINANCE GOALS

JURISDICTION	PARTICIPATION RATE	VEHICLE TRIP REDUCTION	PEAK HOUR VEHICLE TRIP REDUCTION	LEVEL OF SERVICE	OTHER
Alexandria, VA	10 - 30% non-SOV in peak				maximum 40% of SOV trips in peak direction occur in peak period
Bellevue, WA CBD				maintain LOS D on city streets currently at D or worse	
Bellevue, WA non-CBD	18% non-SOV			preclude degradation of traffic conditions currently at E or worse	
Berkeley, CA	maximum 40% SOV in peak period				
Concord, CA				maintain LOS D on down-town streets	
Contra Costa County, CA county-wide	Primary - I 80 and I 680/ State Route 24 corridors Yr 1 - max 80% SOV Yr 2 - max 75% SOV Yr 3 - max 70% SOV Yr 4 - max 65% SOV Alternate - outside I 80 and I 680/State Route 24 corridors Yr 1 - max 90% SOV Yr 2 - max 85% SOV Yr 3 - max 80% SOV Yr 4 - max 75% SOV Alternate - I 80 and I 68 State Route 24 corridors Yr 1 - max 70% peak SOV Yr 2 - max 65% peak SOV Yr 3 - max 60% peak SOV Yr 4 - max 55% peak SOV Alternate - outside I 80 and I 680/State Route 24 corridors Yr 1 - max 80% peak SOV Yr 2 - max 75% peak SOV Yr 3 - max 70% peak SOV Yr 4 - max 65% peak SOV		individual goals established for each development		

EXHIBIT 1: ORDINANCE GOALS (Continued)

ORDINANCE GOALS					
JURISDICTION	PARTICIPATION RATE	VEHICLE TRIP REDUCTION	PEAK HOUR VEHICLE TRIP REDUCTION	LEVEL OF SERVICE	OTHER
Contra Costa County, CA Pleasant Hill BART Station Area	Primary Yr 1 - max 80% SOV Yr 2 - max 75% SOV Yr 3 - max 70% SOV Yr 4 - max 65% SOV				
	Alternate Yr 1 - max 70% peak SOV Yr 2 - max 65% peak SOV Yr 3 - max 60% peak SOV Yr 4 - max 55% peak SOV				
El Segundo, CA			20%		
Golden Triangle Area, CA	24% non-SOV by 1992 35% non-SOV by 2000		5% in each of years 1 and 2		
Maricopa County, AZ					1.3 auto occupancy
Montgomery County, MD	Existing employers: 25% transit 5% walk				Existing employers: total peak period trips < 60% of total work force concentration of peak period trips in any 15 minute interval < 40% of work force
North Brunswick, NJ	New developments: 30% transit 5% walk		30% for non-residential developments		
Oxnard, CA				maintain LOS C at city intersections	
Pasadena, CA					encourage use of alternate modes and alternate work hours

EXHIBIT 1: ORDINANCE GOALS (Continued)

ORDINANCE GOALS					
JURISDICTION	PARTICIPATION RATE	VEHICLE TRIP REDUCTION	PEAK HOUR VEHICLE TRIP REDUCTION	LEVEL OF SERVICE	OTHER
Pima County, AZ	Yr 1 - 15% non-SOV Yr 2 - 20% non-SOV Yr 3 - 25% non-SOV Yr 4 and beyond - 1% annual increase in non-SOV up to 40% or 1.5% annual reduction in average VMT per employee				
Placer County, CA			25%		
Pleasanton, CA			Yr 1 - 15% Yr 2 - 25% Yr 3 - 35% Yr 4 - 45%	Exceed mid LOS D only after 45% reduction in peak period trips is achieved Preclude LOS E on city streets and intersections	
Sacramento, CA developer ordinance	35% non-SOV in peak				
Sacramento, CA employer ordinance	35% non-SOV in peak				
San Buenaventura, CA	27.5% non-SOV within 6 months of occupancy 55% non-SOV within 18 months of occupancy				

EXHIBIT 1: ORDINANCE GOALS (Continued)

ORDINANCE GOALS					
JURISDICTION	PARTICIPATION RATE	VEHICLE TRIP REDUCTION	PEAK HOUR VEHICLE TRIP REDUCTION	LEVEL OF SERVICE	OTHER
San Rafael, CA				Maintain LOS D for street operation in Northgate Activity Center	PM peak period trip allowances: small residential - .7 trips per unit large residential - 1.1 trips per unit general office - 2.6 trips per 1000 sq ft industrial - 1 trip per 1000 sq ft retail - 3.3 trips per 1000 sq ft major retail - 8.3 trips per 1000 sq ft hospital - 1.3 trips per bed theatre - 1.6 trips per seat medical offices - 5 trips per 1000 sq ft reduce SOV commuter trips
Seattle, WA CBD					
Seattle, WA major institutions					
South Coast Air Quality Management District (SCAQMD), CA		50%			reduce average vehicle ridership (employees/vehicles) in peak periods to 1.3, 1.5, or 1.75 depending on area

achieve to mitigate traffic congestion and improve air quality. These may include one or more of the following:

- Participation rate. Participation rate refers to the percentage of the employer's workforce expected to commute to and from work by mode other than single-occupant vehicle (non-SOV). This goal is sometimes expressed as a decrease in the percentage of single occupant vehicle (SOV) commute trips. When this goal is used, the program emphasis is mode change rather than change in travel time or peak shift.

One advantage of using this goal is that it can be easily calculated from employer surveys. Jurisdictions using this goal must compile data on pre-program non-SOV driving rate.

Jurisdictions incorporating participation rate goals in their traffic mitigation ordinances include Contra Costa County (maximum 65 percent SOV), Pima County (25 percent non-SOV by year 3), City of Sacramento (35 percent non-SOV), San Buenaventura (55 percent non-SOV), Alexandria (30 percent non-SOV), and the City of Bellevue, Washington in its ordinance applicable to specified land use districts outside the CBD (18 percent). The model traffic mitigation ordinance being developed by the Golden Triangle Task Force for adoption by the County of Santa Clara and five cities also uses the participation rate goal (24 percent non-SOV by 1992 and 35 percent non-SOV by 2000).

- Vehicle trip reduction. This goal refers to the percentage reduction in vehicle trips, generally as result of decreasing SOV commute trips. The advantage of using this goal is that the program results can be easily translated into effect on traffic conditions (i.e., percentage change in traffic volume).

A baseline must be established against which reduction in vehicle trips can be measured. The baseline can be 1) the number of vehicle trips that would occur if all commuters drove alone, or 2) the existing number of vehicle trips before the program was implemented. Most jurisdictions utilize the number of trips that would occur if all commuters drove alone as the baseline since this number is simpler to determine.

The wide range in vehicle trip reduction rates required in various ordinances can be attributed to how the baseline is computed. The goal for a city, such as the City of Seattle (50 percent in the major institutions ordinance), in which the baseline is calculated as the number of trips that would occur if all commuters drove alone, will be higher than the goal established in a city using the actual trip rate as the baseline, such as Maricopa County with a vehicle trip reduction goal of 5 percent in each of the first two program years.

El Segundo also utilizes the trip reduction goal (20 percent) in its ordinance.

- Peak hour vehicle trip reduction. This goal is similar to the vehicle trip reduction goal; however it considers reduction in vehicle trips only during the specified peak hour. Reduction in peak hour vehicle trips can result from:
 - increases in commute alternatives use (ridesharing or transit)
 - shifts to off-peak hour travel (staggered work hours)

The ordinances adopted by the City of Pleasanton and Placer County require reductions in peak period employee commute trips of 45 percent and 25 percent, respectively.

- Level of Service (LOS). Level of service (LOS) goals refer to desired traffic conditions on specified road facilities. This type of goal may specify maintenance of existing level of service or prevention of deterioration of traffic conditions beyond specified level.

Measuring goal attainment requires a traffic monitoring program. Measured results may not accurately reflect the program's effects (e.g., a program could result in a large change in SOVs but traffic could remain high due to traffic passing through the city and/or the city's non-commuter traffic).

The City of Bellevue, Washington, adopted an interim traffic ordinance applicable to new development within the CBD with two level of service goals: 1) to maintain PM peak hour level of service D on any portion of city street system affected by proposed new development and 2) to permit no further degradation of traffic conditions on portions of city street system affected by proposed development which is currently at level of service E or worse.

Oxnard established a goal to maintain LOS C at city intersections. The ordinance adopted by Berkeley includes two goals: 1) maintain LOS D on downtown streets and 2) achieve participation rate of 40 percent non-SOV.

While the majority of ordinances reviewed utilize one of the above types of goals, several jurisdictions have established unique goals. For example, the City of San Rafael established maximum P.M. peak period trip allowances for various land uses, such as .7 trips per small residential unit, 2.6 trips per 1000 square feet of general office space, 1 trip per 1000 square feet of industrial space, and 3.3 trips per 1000 square feet of retail space.

Montgomery County utilizes a combination of participation rates (25 percent transit for existing employers, 30 percent transit for new employers, and 5 percent walk for new and existing employers) and average automobile occupancy rates of 1.3 for new and existing employers.

North Brunswick utilizes goals based on peak period trips as a percentage of workforce (maximum 60 percent overall and maximum 40 percent within any 15 minute interval of peak period).

Regulation XV, recently adopted by the South Coast Air Quality Management District in Los Angeles, measures average vehicle ridership (employees/vehicle trips). Goals are 1.3, 1.5 or 1.75 depending on area.

Within a jurisdiction, ordinance goals may vary. Frequently ordinance goals are staged over a period of years. This practice reflects an understanding that programs require start-up time and that it takes time to change employee commute habits. As an example, the ordinance adopted by the City of Pleasanton, CA, has an overall goal of 45 percent reduction in peak period employee commute trips. Required progress towards the overall goal is staged over a four year period with a 15 percent reduction required in the first year, a 25 percent reduction required in the second year, a 35 percent reduction required in the third year, and a 45 percent reduction required by the end of the fourth program year. In another example, the model ordinance being developed by the Golden Triangle Task Force has a short term goal of 24 percent non-solo driving by 1992 and a long-term goal of 35 percent by 2000. Other jurisdictions with staged goals include Pima County, Arizona, and Contra Costa County, California.

The ordinance adopted in 1986 by Contra Costa County for the Pleasant Hill Bay Area Rapid Transit (BART) Station Area established a primary goal of no more than 65 percent of all employees commuting in SOVs with an alternative goal, for employers that demonstrate that the primary goal is not feasible, of no more than 55 percent of all employees commuting during peak periods in SOVs. Primary and alternative goals are also staged over a four year period.

Jurisdictions may establish different goals for different groups. As an example, in its ordinance, Montgomery County, Maryland, established a less stringent goal for existing employers (25 percent of employees commute non-SOV) than for new developments (30 percent of employees commute non-SOV). The ordinance adopted in San Rafael in 1983 which established peak period trip allowances for various types of development is another example.

Goals sometimes vary for geographic areas within a jurisdiction. For example, in Contra Costa County, higher goals are specified for the I-80 and I-680/State Route 24 corridors than for the rest of the county. This ordinance also provides primary and alternate goals. Additionally, a separate ordinance was developed for the Pleasant Hill BART Station area.

The ordinance adopted in Pasadena in 1986 does not specify measurable goals. Goals of the ordinance are to encourage use of alternate modes and encourage alternate work hours. However, unlike many of the other ordinances reviewed, this ordinance requires developers to take specific TDM measures rather than providing a menu of TDM options to select to achieve specific goals.

SCOPE

TDM ordinances may apply to employers (existing and/or new), developers and property owners, office/industrial complexes, retail developments, and residential developments.

An equity issue arises in determining which groups will be held responsible for reducing traffic congestion through the traffic mitigation ordinance. Existing employers may argue that new developers and employers should be solely responsible, or more responsible, for mitigating the traffic congestion since the new development caused the traffic conditions to move from acceptable to unacceptable. New developers or employers, on the other hand, might argue that existing employers should be equally responsible since they

contribute to the overall traffic congestion problem. Further, it may be argued that in maturing suburban cities, conditioning new development only may not be adequate to mitigate the traffic congestion problem.

The scope of the ordinances reviewed is varied. Generally, the ordinances can be categorized as follows:

- ordinances applicable to new and existing employers and new developments:
 - Concord, CA
 - Contra Costa County, CA
 - El Segundo, CA
 - Golden Triangle Area, CA
 - Montgomery County, MD
 - North Brunswick, NJ
 - Oxnard, CA
 - Placer County, CA
- ordinances applicable only to employers (new and existing):
 - Maricopa County, AZ
 - Pima County, AZ
 - Pleasanton, CA
 - Sacramento, CA (draft employer ordinance)
 - South Coast Air Quality Management District, CA
- ordinances applicable only to new developments and substantial expansions of existing structures:
 - Alexandria, VA
 - Bellevue, WA
 - Berkeley, CA
 - Contra Costa County, CA (Pleasant Hill BART Station Area)
 - Pasadena, CA
 - Sacramento, CA (draft developer ordinance)
 - San Buenaventura, CA
 - San Rafael, CA

The developer ordinance in Seattle applies to both new and existing developments.

Most jurisdictions exclude residential developments in the scope of their traffic mitigation ordinances, since it is generally easier to initiate transit and ride share incentive programs at the destination rather than the origin end of commuter trips. Exceptions to this include the following:

- the ordinance adopted by the City of Bellevue for the non-CBD which includes requirements applicable to new development of residential/multiple family dwellings with 16 or more units
- the county-wide ordinance adopted by Contra Costa County which includes requirements for residential projects with 13 or more dwelling units

- the North Brunswick ordinance which includes requirements for new residential developments with 20 or more units
- the City of Concord ordinance which includes requirements for new residential developments with 100 or more units
- the ordinance adopted by the City of Alexandria which includes requirement for new residential developments with 250 or more units

In general, retail developments are also excluded from traffic mitigation ordinances. The ordinances adopted by San Rafael, CA, and the City of Alexandria, VA, however, include requirements for retail developments.

The decision regarding which groups will be subject to ordinance requirements is determined, in part, by the objectives of the ordinance. For example, if the objective is to reduce the traffic impacts of new development, only new developers and new employers may be affected. If the objective is to maintain existing traffic conditions, the jurisdiction will have to offset additional traffic from new development by reducing vehicle trips of existing employers and development. Thus, in this case, both new and existing employers would be subject to the ordinance requirements. Similarly, if the objective is to improve traffic conditions, the ordinance must apply to both new and existing employers.

Typically, the ordinance requirements vary by size of the employer/developer with a minimum threshold. Thresholds for developments are typically based on gross square feet of development, while thresholds for employers are based on number of employees. In the city of Bellevue ordinance, development size is measured by anticipated peak vehicle trips to be generated. Employers/developments below the minimum thresholds are not subject to the requirements of the ordinance. Small employers may be subject only to informational requirements -- to provide the jurisdiction with information regarding the number and commute habits of its employees and to provide their employees with information on available alternative commute modes and alternative work hour programs. Larger developers/employers may be required to develop and implement programs with specific demand management measures or to select TDM measures from a menu of options.

In some ordinances, affected employers or developers are phased into the program over time. For example, the requirements of the county-wide ordinance adopted in Contra Costa County were applied to new employers and project sponsors as of the effective date of the ordinance (November 27, 1987); existing employers and project sponsors were not subject to the ordinance requirements until one year later.

Regulation XV, recently adopted by the South Coast Air Quality Management District, provides for a phasing in of requirements by size of employer as follows:

- July 1, 1988 - employers with 500 or more employees
- January 1, 1989 - employers with 200 - 499 employees
- January 1, 1990 - employers with 100 - 199 employees

Similarly, in Maricopa County, employers will be phased in to the requirements of the ordinance between December 31, 1988 and December 31, 1989 according to the number of employees.

GEOGRAPHIC COVERAGE

Traffic mitigation ordinances can apply to all areas within a jurisdiction's boundaries or only to selected areas within the jurisdiction. A potential advantage to applying the ordinance requirements to the entire jurisdiction is the perceived equitable treatment of all employers/developers within the jurisdiction. This however is dependent on the specific goals of the ordinance. The objective of the ordinance adopted in Montgomery County, MD, is to permit greater development in the Silver Spring CBD, and therefore only applies to that portion of Montgomery County. Other ordinances, such as the one adopted city-wide in Alexandria, VA, are intended to reduce traffic in the entire city.

Jurisdiction-wide application may have greater impact on commuters travel between areas than would application to selected areas. However, applying the ordinance requirements to critical growth and traffic congestion areas only may have the advantage of allowing stricter transportation demand management measures. It may also be easier to obtain political support for programs which focus on areas with highly visible traffic congestion problems.

The majority of the ordinances reviewed during this study have been adopted jurisdiction-wide. Jurisdictions with ordinances covering selected areas within the jurisdiction only include:

- El Segundo, CA - ordinance is applicable to the city's commercial and manufacturing zones
- Montgomery County, MD - ordinance is applicable to the Silver Spring CBD
- Placer County, CA - ordinance is applicable to the unincorporated portion of South Placer Implementation Area
- San Buenaventura, CA - ordinance is applicable to the Arundel office/commercial/retail area
- San Rafael, CA - ordinance is applicable to the Northgate activity center overlay district

Several jurisdictions have adopted or are developing ordinances which will be applicable to different geographic areas. The City of Bellevue, Washington, adopted two ordinances - one for the central business district (CBD) and one for specified land use districts outside the CBD -- with different requirements. Contra Costa County also adopted two ordinances -- one applicable only to the redevelopment area covered by the Pleasant Hill BART Station Area Specific Plan and one applicable to the rest of the County.

ORDINANCE REQUIREMENTS

In general, there are four types of requirements found in the traffic mitigation ordinances studied. These include:

- data collection, survey and report requirements
- information dissemination
- designation of transportation coordinator
- development of traffic mitigation program

Many ordinances establish thresholds for requirements based on the size of the employer (number of employees) or development (number of gross square feet). The requirements are generally more stringent for larger employers/developers. Small employers may be subject only to the data collection and survey and information dissemination requirements, while larger employers and developers would be subject to all of the ordinance requirements. Employers/developers below a certain size may not be subject to any requirements under the ordinance.

As an example, in Pleasanton, CA, all employers regardless of size must annually submit survey information to the City to establish commute pattern data and to provide carpool and vanpool matching information. Employers with 10 or more employees are also required to develop and implement an employee information program to educate employees about alternative commute modes. In addition, employers of 50 or more employees must appoint a workplace coordinator and develop and implement a program of TDM measures to achieve target reductions in peak period traffic.

Data Collection, Survey and Report Requirements

Most ordinances require employers to collect and submit information to the jurisdiction regarding employee commute characteristics on an annual basis. The data collected may include the number of employers beginning and ending work during designated peak periods, number of employees commuting by various means, and the number of employees participating in alternative work hour programs. Some jurisdictions, for example the City of Pleasanton and North Brunswick, establish minimum response rates for the employee surveys.

To help in data collection, some jurisdiction develop and distribute survey forms and report forms to employers. The standardization of surveys and reports increases participation and aides in survey tabulation and analysis.

Ideally, employers conduct an initial survey effort before implementing the program in order to establish a baseline for measuring progress in achievement of ordinance objectives. The annual survey is then used to assess progress.

Information Dissemination

Most ordinances require affected employers to provide information on alternative commute mode options, alternative work hour programs, and travel

reduction measures to employees. Typically, employers are required to provide written information on an annual basis to all existing employees and to all new employees on the date of hire. This requirement is often applicable to a range of small employers who may not be subject to the requirements to designate a transportation coordinator or to develop and implement a travel reduction plan.

Ordinances may require employers or developers/property owners to display alternate commute mode information in common areas such as the lobby or cafeteria.

In most cases, information/brochures are provided by the jurisdiction, local rideshare matching agency, and or local transit agency.

In addition to the permanent commuter information center, the City of Seattle requires developers/property owners to conduct semi-annual promotions of the transportation management program. City and METRO staff provide assistance to the developers/property owners in conducting these promotions. The promotions range from two hour to full day commuter fairs depending on the size of the development.

Designation of Transportation Coordinator

Many ordinances require large employers/developers to designate a transportation coordinator to take responsibility for implementing, monitoring and reporting on the progress of the travel reduction program. The transportation coordinator may also represent the employer or complex on a Transportation Management Task Force. In some cases, property owners of large complexes are required to appoint a complex coordinator who will be responsible for this function for all small employers within the complex.

Development of Traffic Mitigation Program

The most significant requirement associated with the traffic mitigation ordinance is the requirement to develop, submit, and implement a traffic mitigation program designed to achieve the objectives of the ordinance (reductions in peak period traffic or percentage of solo drivers). This requirement is typically applicable only for larger employers or developers.

The means to achieve the ordinance goals are generally left to the employer to select, usually from a menu of options. These means can include the following:

- instituting flextime or compressed work weeks
- establishing shuttle services
- developing ridesharing programs
- subsidizing transit
- subsidizing ridesharing

- providing preferential parking for rideshare vehicles
- providing loading and unloading areas for rideshare and transit vehicles
- providing amenities for commuters walking or bicycling to work
- permitting employees to work at home or to telecommute

The menu options for an ordinance establishing conditions of approval for developers may be more capital related (i.e., involving construction of shelters, loading and unloading areas for car and vanpools, bicycle racks, showers and lockers) while the menu options for employer ordinances tend to be more program related (i.e., involving alternate work hours, rideshare matching, subsidies).

Some ordinances also provide options for financing transportation service improvements/operations to meet the ordinance requirements. For example, the developer ordinance drafted by the City of Sacramento includes the following options for developments within 1320 feet of an existing or designated bus route or light rail station:

- agreement to pay all or part of the cost of land, construction and/or maintenance of transit center/station
- agreement to pay a one-time transit operating subsidy to Sacramento RTD

Most of the ordinances reviewed provide a menu of TDM options for employers/developers to select. Some jurisdictions specify in their ordinances the number of TDM options that must be selected.

The City of Bellevue, however, dictates specific transportation management measures for specific developments, including:

- provision of specially marked parking spaces in preferential location during peak periods for registered car and vanpools
- provision of financial incentives for employees commuting by carpool, vanpool and transit
- provision of a taxi-script system of low cost rides home for employees who miss their bus or car/vanpool because of employer requirements or emergencies

The City of Pasadena ordinance also mandates specific TDM measures for new developments, including a set aside of 10 percent preferential parking for carpools, provision of commuter matching services, provision of bicycle parking facilities, and provision of carpool and vanpool loading areas.

The menu approach is more defensible politically than is requirement of any one specific action. An individual action may not be appropriate to all employers, for reasons such as differing employer types, sizes, locations, or "corporate culture". Also, any specific action may only be associated with a nominal, e.g., 1 to 2 percent, reduction in trips. The menu approach is more

compelling, as few can object to the principle that employers should promote traffic reduction or deny that at least some actions on a comprehensive list are appropriate to the firm.

Most ordinances require affected employers to submit an annual summary report describing the transportation management measures implemented and the program's progress.

Parking Reduction Options

Some ordinances reduce parking requirements for developments that achieve a specified level of trip reduction through implementation of transportation demand management strategies. This option is seen as an incentive or reward for compliance. Jurisdictions which include a parking reduction option for developers include Sacramento and Pasadena.

PROGRAM MANAGEMENT

In general, three groups are involved in the directing, implementing and managing of TDM ordinances:

- public/private task force
- jurisdiction
- employer/developer

Public/Private Task Force

Many jurisdictions with ordinances have established a public/private task force to provide policy guidance and to assist jurisdiction staff in managing the program. Typically such task forces are composed of local jurisdiction management, representatives from large employers or developers, representatives of local transit authorities, and regional agencies and associations. Task Force members may be appointed by the Board of Supervisors/City Council (e.g., Maricopa County) or elected.

Task Force responsibilities may include one or more of the following:

- serving as advisory body to local jurisdiction staff and the County Board of Supervisors or City Council
- establishing guidelines for program implementation
- reviewing employer/developer TDM programs
- mandating revisions to employer/developer TDM programs when results are not being achieved
- monitoring program performance and recommending changes
- serving as a hearing board for appeals

In Pima County, AZ, a regional task force has been implemented, composed of 1 representative of each of the 5 participating jurisdictions, 10 members elected by major employers, 2 owners of business parks, office buildings or shopping centers, and 2 public interest group representatives. A technical advisory committee, consisting of technical staff from the participating jurisdictions, will support the regional task force in survey design, data collection, and analysis.

Jurisdiction Management

Local jurisdictions typically hire a program manager to implement and oversee the traffic mitigation program. The manager may or may not be supported by staff depending on his/her responsibilities, the scope of the ordinance, and the financial resources of the jurisdiction. Many jurisdictions, in fact, have one person operations (e.g., Contra Costa County, Oxnard, El Segundo, and Berkeley). The cities of San Buenaventura and Alexandria have only 1 part time position responsible for the TDM program. The SCAQMD, on the other hand, has a staff of approximately 15. SCAQMD will be responsible for annually reviewing 8,000 trip reduction plans when the program is fully implemented in January, 1990.

The ordinances which will be adopted in the Golden Triangle area will be managed by a central implementation agency, rather than the individual jurisdictions. The participating cities may however elect to provide employee outreach services.

The regional program in Pima County is being implemented by the Pima Association of Governments with a staff of up to five positions. As noted above, a regional task force has also been implemented to oversee implementation of the ordinances. As noted above, a technical advisory committee, consisting of technical staff from each of the participating jurisdictions will support the regional task force.

Typical responsibilities of the local jurisdiction management staff may include one or more of the following:

- developing employee outreach programs
- providing technical assistance to employers/developers
- training employee coordinators
- producing marketing materials
- developing guidelines, procedures and forms for submittal of annual surveys and TDM reports
- administering the ordinance
- monitoring and reporting on program performance
- reviewing and approving TDM programs

- reporting to an advisory committee/task force and /or the City Counsel or County Board of Supervisors
- monitoring compliance and initiating or recommending enforcement action
- recommending changes to ordinance provisions

Effective implementation of an ordinance requires that the jurisdiction provide services to assist employers in complying. For example, Pleasanton has a full-time "TSM Coordinator" who provides support and assistance to employers, as well as follow-up and tracking of compliance. This person in fact serves as staff to the Employer Task Force that has a De-Facto management role for the ordinance. Pleasanton also provides data processing services for the employee surveys that each firm must submit. Providing these and other services is not only vital to achieving compliance with a new ordinance, it should be recognized that it is incumbent on the locality to provide these services if compliance is to be reasonably expected. North Brunswick, N. J.'s experience to date implementing its ordinance supports this view from the opposite perspective. The Town had no plans or resources to support the ordinance's implementation when it was adopted, but quickly realized this need; the response of the local business community to the North Brunswick ordinance also affirms this need.

Many towns are similar to North Brunswick in this respect. The ability to dedicate a staff person to this function is likely to be significantly beyond the financial and administrative abilities of small jurisdictions. Moreover, the technical staff skills required are not likely to be available to many small communities.

This suggests the benefits of a multi-jurisdictional approach, if only limited to support services, rather than enactment of a common ordinance. Effective regional service entities such as Commuter Computer (Commuter Transportation Services) in Los Angeles have also been instrumental in educating and providing necessary support services to the business community in this area.

Employers/Developers

Most ordinances require affected employers/developers of a certain size to designate a program coordinator. This person is typically responsible for implementing the ordinance requirements, including:

- disseminating information to employees on commute alternatives and alternate work hour programs
- coordinating data collection activities for annual surveys
- developing and submitting TDM programs
- implementing approved TDM program
- serving as liaison to City staff
- participating in public/private task force

For ordinances that place requirements on complexes, a complex coordinator may be designated with responsibility for these activities for employers within the complex.

Not all ordinances require employers/developers to appoint a transportation coordinator. Examples include Montgomery County and El Segundo. However, in both these jurisdictions, most large employers have appointed a transportation coordinator to implement the TDM programs.

The Contra Costa Centre Association, a non-profit organization composed of individual developers within the Pleasant Hill Bart Station Specific Plan Area, was formed in 1985 to implement and manage shared commitments which include the TDM program. All but one property owner has voluntarily joined this association.

Other

Maricopa County will contract with the local transportation provider, the Regional Public Transportation Authority (RPTA), to do the majority of advertising and public information work and to provide training and technical assistance to employers. Prior to the state legislation mandating a TDM program for Maricopa County, the RPTA sponsored several voluntary TDM programs.

FUNDING

Most ordinances are supported by the jurisdictions' general funds. Each participating jurisdiction in the regional TDM program which will be implemented in the Golden Triangle Area will finance the regional services to be provided by the TDM implementation agency.

However, several jurisdictions have alternate sources of funds, in addition to or in place of general funds.

Several jurisdictions rely on fees as a major source of revenue. The SCAQMD has established plan submission and plan revision fees designed to cover program costs (\$125 with initial plan and \$50 with annual update). The City of Sacramento will also use fees to support its programs. The draft employer ordinance provides for fees to be assessed for the issuance and renewal of transportation management certificates. These fees will be used to defray the costs of administration, monitoring and enforcement of the ordinance. The draft developer ordinance establishes a filing fee for the transportation management permit required of all new developments. The El Segundo ordinance provides for the establishment of filing fees by council resolution.

Maricopa County received a grant from the Air Quality Fund of Arizona's Department of Environmental Quality which will support the county-wide TDM program from October 1988 through June 1990. Beyond 1990, the probable funding source will be user fees which are planned for 1990.

The TDM program in Pima County was initially totally locally funded. However, Pima County anticipates receiving state funding in the future now that the 1988 Air Quality bill has been passed, mandating TDM programs in counties of certain size.

The TDM programs in the City of Seattle are funded through the city's general fund and FHWA Federal Aid to Urban Systems.

Several jurisdictions also rely on parking related fees to finance their TDM programs. For example, in Montgomery County, parking fees from the county lots in Silver Spring are used in part to fund the TDM program. In the City of Concord, the TDM program is funded from a transportation system management fund consisting of interest accrued on in-lieu parking fund and the net income derived from any city-operated parking facilities and from parking meters.

Lack of a secure funding mechanism has been noted as a problem in TDM ordinance implementation in at least one jurisdiction. As noted above, many small jurisdictions do not have sufficient financial resources to hire adequate TDM staff and to provide the necessary services which are instrumental in the success of the TDM program such as technical assistance and training.

ENFORCEMENT

Compliance with traffic mitigation ordinances is generally determined based on meeting program requirements rather than achieving specific goals. Most jurisdictions specify in their ordinances, what actions, or inactions constitute a violation of the ordinance and specify the jurisdictions recourse for failure to comply with the requirements of the ordinance. Ordinance violations are typically subject to increasing fines for each day of the violation. The ordinances adopted by the SCAQMD and in Contra Costa County include a fine and/or jail term for violation of their requirements.

Typically, jurisdictions identify failure to conduct the survey, provide ridesharing and transit information to employees, or develop, submit, and implement an approved travel reduction plan as violations of the ordinance. For most jurisdictions, failure to achieve the specified goal is not considered a violation provided the employer/developer has made a good faith effort to meet the goal.

In some cases, businesses or developers which fail to achieve a specified goal may be required to amend their plans and implement additional traffic reduction measures. The City of Pleasanton, for example, may require employers who have failed to achieve the targeted reduction in vehicle trips to submit a revised program or the TSM Task Force may require the employer to implement specific program elements. Failure to revise the plan and/or implement additional procedures would be a violation subject to civil penalty (\$250 per day).

San Buenaventura requires property owners failing to achieve the goal to provide stronger alternative mode incentives and levies in-lieu fees if the target participation rate is not met after a six-month grace period. The ordinance adopted by the City of Bellevue for the CBD area has a performance standard in effect; financial contributions are required if the property owner

fails to achieve the standard. In Concord, if a project sponsor fails to implement the TDM plan, the City may assume responsibility for implementing the plan directly. The project sponsor would be responsible for all costs associated with the program.

For developer conditioning ordinances, enforcement of the ordinance requirements typically takes the form of denial of the building or occupancy permit for developers who fail to develop or implement an appropriate travel reduction plan in accordance with the requirements of the ordinance. In Pasadena, the city zoning administrator can revoke the use permit for non-compliance with ordinance requirements. Similar provisions are contained in the ordinances adopted by the cities of Alexandria and Seattle.

Another enforcement strategy used in the ordinance adopted in Bellevue is the requirement that property owners annually provide an assurance bond as a guarantee that required financial incentives will be provided. Forfeiture of the bond would occur for non-compliance.

Although most ordinances include specification of what constitutes a violation and the jurisdictions recourse, to date there have been no reported cases of fines actually being levied for failure to comply with ordinance requirements.

RESULTS

Most traffic mitigation ordinances are too new for conclusions regarding effectiveness to be drawn. Most ordinances are still in the development, adoption, or early implementation stages.

The City of Pleasanton, which adopted its landmark employer-based ordinance in 1984, has collected four years of data on its performance. The City considers its ordinance to be successful, with an overall reduction in peak hour vehicle travel of 43 percent in 1988 (the City's target for employers in the fourth year is 45 percent). This figure may indeed be low since it assumes that the 20 percent of employees who did not respond to the survey drove alone. 75 percent of the large employers reached their target in 1988 (based on number of years in the program). Of the 17 (25 percent) who did not reach their goal for 1988, 7 improved their performance over the prior year. Most of Pleasanton's trip reduction appears to result from changes in the timing of the trip rather than increases in non-solo driving. Pleasanton has experienced an additional 10 percent shift to off-peak hour commuting since program inception.

The City of San Rafael adopted an ordinance in 1983 which requires, as a condition for development permit approval, developers to maintain P.M. peak period trip allowances based on land use. To date, 11 developments have been conditioned on trip allowances. All have met their goals except two which the city explains are unique land uses.

A key factor affecting the success of an ordinance is the area's stage of development. For example, a newly developing area may experience limited success, particularly in achieving participation goals, until certain amenities, such as restaurants, are provided. In fact, this lack of services and amenities has been noted as a problem in the Pleasant Hill BART Station Area within Contra Costa County which is currently at approximately 10 percent

of anticipated build-out. The ordinance is likely to be more successful when development is denser, providing more opportunity for ridesharing, and when sufficient services and amenities are built.

While it is too soon to know whether ordinances will be effective in achieving their particular goals related to decreases in traffic congestion, it is clear that the use of traffic mitigation ordinances is increasing. The result is that public and private sector are becoming more aware of the problem and the positive effects that ridesharing, transit, alternative commute modes (other than SOV), and flexible working hours can have on traffic congestion. Many developers, as a result of the ordinance, are building infrastructure to accommodate SOV alternatives. This is important for the long-term success of traffic mitigation programs. Clearly, many employers and property owners, by complying with the ordinance requirements are educating their employers about potential solutions to the traffic congestion problem and are making alternative commute modes more readily available, more amenable, and less expensive. Indeed, some jurisdictions have noted that developers, recognizing the benefits of traffic reduction programs, are incorporating TDM measures in their marketing efforts to attract tenants.

ORDINANCE DEVELOPMENT

TDM ordinance development is frequently the result of a consensus building process where the public and private sectors agree on the need for a TDM program and on the ground rules for program implementation.

Many of the ordinances reviewed have been developed through a joint effort of the jurisdiction and the business community, typically represented by a task force (e.g., Pleasanton, Pima County, North Brunswick, SCAQMD, Concord, Pasadena, Berkeley). Other jurisdictions have involved developers and employers in the process through informal discussions. This public/private approach has been noted as a major contribution to the successful passage of several TDM ordinances.

Obtaining support from developers is frequently easier than obtaining employer support for TDM ordinances. Jurisdictions have leverage over developers, as many jurisdictions have the authority to establish conditions of development even without adoption of an ordinance. Employers, however, may not immediately understand how they will benefit from an ordinance or why they should support one. Jurisdictions considering TDM ordinances may need to spend considerable time educating employers to gain their support.

The development of the Pleasanton ordinance is noteworthy. Early in 1984, a citizens' general plan review committee noted that the county's transportation engineers assumed significant use of commute alternatives and flexible work hours in their studies. The committee reviewed the concept of a trip reduction ordinance and recommended that one be developed. City staff and representatives of developers and employers subsequently developed a draft ordinance. From the beginning, developers supported the ordinance concept. Employers however were slow to accept and support the concept. A number of meetings were held to explain the ordinance requirements. Additionally, city staff talked to many employers individually. In response to employer concerns, the city agreed to hire a full-time program coordinator to assist employers in complying. The city also agreed to assign enforcement

responsibility to a TSM task force composed, in part, of representatives of the business community. After six months of cooperative effort, the ordinance was adopted on October 2, 1984 with no opposition.

Regulation XV was passed by the SCAQMD in Los Angeles on December 11, 1987 following a cooperative seven-month effort between the SCAQMD and a 12 member trip reduction advisory committee comprised of SCAQMD Board members, Los Angeles Chamber of Commerce, Automobile Club of Southern California, Los Angeles Central City Association, UCLA's Urban Planning Department, Atlantic Richfield Co., Disneyland, and the Irvine Co.

Similarly, the North Brunswick ordinance, adopted October 5, 1987, is the result of a seven-month study conducted by a task force comprised of representatives of the local and county government, employers and developers.

In Maricopa County, the TDM program was developed in response to a state bill requiring TDM programs from counties of certain size to improve air quality.

REGIONAL APPROACH

Several jurisdictions and government associations have taken the regional approach to traffic mitigation. For example, Pima County, Arizona, and four cities within the county entered into an interjurisdictional agreement on April 18, 1988 to adopt consistent transportation system management ordinances throughout the county. Subsequently each jurisdiction adopted an ordinance (with comparable provisions). The effort was spearheaded by the Pima Association of Governments (PAG) which continues to manage the Travel Reduction Program in conjunction with a Regional Task Force.

The South Coast Air Quality Management District (SCAQMD) adopted Regulation XV in mid 1988. This quasi-governmental agency has authority over a four county area and thus the regulation affects the entire region.

The METRO and Puget Sound Council of Governments (PSCOG) in Seattle developed a model transportation systems management ordinance in 1986 and are advocating that all jurisdictions in King County adopt similar ordinances to achieve regional consistency. To date, only two jurisdictions, the cities of Bellevue and Seattle, have adopted TSM ordinances. The City of Bellevue modeled its ordinance after the one developed by METRO; Seattle has taken a different approach to its ordinance. The City of Kent has drafted an ordinance, patterned after the City of Bellevue's Non-CBD ordinance. Other jurisdictions within King County are applying transportation demand management conditions to developments through State Environmental Policy Act (SEPA) authority.

The Golden Triangle Task Force, established as a regional transportation planning effort, is currently drafting a model ordinance for use by the Cities of Milpitas, Mountain View, Palo Alto, San Jose, and Sunnyvale, and the County of Santa Clara.

STATE ROLE

Washington

The State Environmental Policy Act (SEPA) authorizes local governments in the State of Washington to require measures of development applicants to mitigate the adverse environmental impacts of the development. SEPA regulations require that transportation system management conditions required of developers be related directly to transportation goals documented in comprehensive plans or other previously adopted policies. The SEPA process allows for case-by-case negotiation with developers in all local jurisdictions. SEPA authorizes but does not dictate specific policies for developer conditioning.

The City of Seattle uses SEPA authority 1) to augment its Land Use Code for mitigation of traffic impacts for downtown development, and 2) to condition developments on a case-by-case basis outside downtown Seattle.

Some jurisdictions, such as the City of Redmond, have adopted administrative procedures to formalize the policies and procedures for developer conditioning authorized by SEPA. Development of administrative guidelines provides staff with policy backing and helps ensure consistency in case-by-case negotiations with developers. Local administrative guidelines are relatively easy to implement since they are developed within a department and do not require Council approval.

Arizona

In 1987, the Arizona State Legislature passed Air Quality Bill 2206, which mandated travel reduction ordinances for counties of a certain size. The State will provide funding for the travel reduction programs.

Maricopa County is currently developing its program which will become effective December 31, 1988. Maricopa County is not adopting an ordinance per se but is operating from the state statute.

Jurisdictions within Pima County adopted travel reduction ordinances prior to passage of the Air Quality Bill.



III. TRAFFIC MITIGATION ORDINANCES: DIRECTIONS AND PROSPECTS

Traffic Mitigation Ordinances provide substantial promise as a widely-applicable tool for managing traffic congestion. There is only limited empirical evidence to date on the actual effectiveness of ordinances, due to the limited time of their application. In Pleasanton the ordinance has been shown to be effective in maintaining reasonable traffic conditions against significant growth in employment, which was the key objective there.

Another type of impact that shows the promise of the ordinance strategy is apparent. This is the political viability of the idea. While there will be philosophical and other resistance to the ordinance concept, that it can be applied is already clear. Dozens of cities have now enacted conditions and ordinances requiring traffic mitigation in the development stage, over a dozen have adopted the employer based approach, and many more will certainly follow suit over the next few years.

Given the demonstrated acceptability and the apparent actual effectiveness of the strategy, the concept appears very appropriate for increased emphasis, as might be facilitated by UMTA's or other non-local parties promotion of the idea. Indeed, this is already happening, as evidenced by new State and regional level activities in California, Arizona, Connecticut and elsewhere.

PERSPECTIVE

The concept of the TSM ordinance is essentially the same as that of the TMA. It pursues the same ends - - enhanced adoption of private actions so that collective benefits are achieved. It does "short-circuit" the educational and consensus approach of a TMA, and is less dependent on leadership for continuation.

The "mandatory" aspect of the ordinance is somewhat a misnomer. While the ordinance has regulatory basis, in most cases TDM ordinances have emerged with the support of the local business community. Moreover, specific actions are usually not mandated by the ordinances; rather, development of a plan that pursues broad objectives is required. The most recent ordinances are not based on achievement of quantified results or impacts, but rather good faith efforts in development and implementation of a plan designed to meet prescribed goals. No cases have been reported to date of employers actually being fined for non-compliance with a TDM ordinance.

The TDM ordinance has much in common with the successful State seat belt laws: rarely enforced, they are still a highly effective communications tool. Companies, like most people, are inclined to comply with reasonable laws that serve their interest, especially if localities use peer pressure and publicity as a preliminary or surrogate means of enforcement. Whether or not 100 percent compliance is achieved is not the issue -- that 90 or even 80 percent support is facilitated by the ordinance is a major and valuable accomplishment, compared to the very minor levels that are achieved by voluntary approaches.

The expansion of the ordinance concept in the short term may also be very dependent on philosophical views of government regulation, and also on the actual and perceived effectiveness of the specific local governments and their leaders who champion the concept.

APPLICABILITY

It appears clear that the ordinance concept can apply to cities facing new traffic congestion problems, such as suburban growth areas. Certainly this is a major and wide-spread problem, where other solutions are notably absent. Yet, does it also apply to older cities with long-standing problems? This may be partially answered by pointing to the Los Angeles experience, where traffic congestion has long been severe, and where the ordinance quickly expanded from a small initiative by mayor Bradley to a massive area-wide program involving all major employers in four counties. Yet, Los Angeles is not an older city like those in the east; it has a relatively low transit modal split, and its problems are somewhat unique.

It remains unclear whether the ordinance will be feared as a stimulus to business relocation out of older central city locations, as opposed to being seen as a reasonable strategy to actually enhance the attractiveness and effectiveness of congested central business district locations. UMTA might seek to prompt consideration of the ordinance in this setting.

The flexibility of the ordinance concept increases its applicability to a wide range of development environments. For example, a jurisdiction experiencing low growth may desire development but at the same time want to minimize the transportation impacts of the new development. This jurisdiction could develop an ordinance requiring low-cost TDM actions which would not be likely to deter potential employers from locating to the area. In fact, provision of TDM programs could be viewed as an asset by employers in increasing their ability to attract employees. An already developed area, particularly in a desirable location, could develop an ordinance with more stringent TDM requirements to control the traffic impacts of additional development.

REGIONAL APPROACH

A key to advancing the ordinance concept may be to implement it at a multi-jurisdictional level. Los Angeles' Regulation XV is an example of this. However, few metropolitan areas have institutions that are empowered as the South Coast Air Quality Management District now is.

The ordinance is certainly most viable as a regional strategy, as this can reduce the fear of shifting the employment and tax base from one municipality to a neighboring one. Regional government is not a likely development in the U.S. however, despite the severity of the traffic problem.

A more informal approach to this end is being observed by the emergence of the "Public Sector TMA" concept. Realizing that TMAs have been vital as a stepping-stone to the ordinance concept, it's fitting that the same consensus, cooperative, collaborative concepts and process demonstrated on the private sector side by TMAs can apply to multiple public jurisdictions that have a common interest in traffic reduction. Thus this idea of interjurisdictional

cooperation for enactment of a joint ordinance, demonstrated in Pima County, Arizona, existing in the Golden Triangle Area in California, and which is now beginning to be developed in Morris County, NJ and elsewhere, may be the next level for advancing the ordinance concept.

STATE ROLE

The role of state governments in supporting the ordinance strategy is emerging. Sponsoring TMAs is a supportive action that, as has been observed, can lead to ordinances. The Connecticut Department of Transportation is developing a program to provide support services to municipalities desiring to develop a TMA. This program will prevent each locality from having to "reinvent the wheel."

States can also develop model ordinances, so that each jurisdiction considering the subject does not have to start from scratch. This would also lead to increased consistency between local jurisdiction. In some cases, enabling legislation may be considered necessary.

States can also provide other support services for jurisdictions or affected employers, e.g., sponsoring conferences, workshops and training courses, providing centralized data processing services. States can also enact tax credit legislation that rewards employers for expenditures made supporting traffic reduction. Politically, this can be a vital step in offsetting opposition to the ordinance strategy by business community members who may not accept the role that the private sector need to play in traffic reduction efforts. California, Massachusetts, Connecticut, and New York have taken or initiated efforts towards employer tax credits.

SUPPLY SIDE AND FINANCING

The TDM ordinance concept focuses primarily on the demand side of the urban transportation problem. Fundamentally, the ordinance strategy reflects the view that employer and developer actions and policies can effect demand markedly. Most of the actions prompted by ordinances are designed to influence demand for existing services, such as subsidizing transit, providing preferential parking for car and van pools, reducing auto use incentives, etc. Some of the actions can also enhance the supply of services, such as the provision of employer-supported shuttles to railroad stations.

A further focus on the supply-side is important. While some shifting of demand to existing services can be achieved, in many cases peak hour transit services are already at capacity, or acceptable services may not be provided from all areas. Enhancing the demand for transit and ridesharing, the primary effect of TDM ordinances (excluding their effects in shifting demand to less congested times), is not adequate to address the problem. Improved services will also be required, which immediately raises the financing issue.

The developer ordinance drafted by the City of Sacramento provides several options for financing transit service improvements/operations to meet the ordinance requirements. These include agreement to pay all or part of the cost of land, construction, and/or maintenance of a transit center/station or agreement to pay a one-time transit operating subsidy. These options are

available only to developers within 1320 feet of existing or designated bus route or light rail station. The Santa Clara "Golden Triangle" ordinance activity also recognizes the interaction of new financing with a demand management strategy.

"Fee in lieu of" ordinances can provide financial resources to meet service expansion needs. For example, a new development ordinance in Stamford, CT allows provision of less-than-code stipulated amounts of parking if compensating payments are made to the City. Funds raised in this way were used to support initiation of a new shuttle bus service. Similarly, a proposed employer ordinance structure would allow firms to opt not to meet the required traffic reduction level by choosing to pay an annual fee-in-lieu-of for each peak hour trip by which the traffic reduction standard is exceeded.

A related financing issue concerns the costs of administering the ordinance, and the provision of support assistance to affected employers. Reviewing thousands of traffic reduction plans will be a consuming task. In Los Angeles, some of the resulting staffing requirement may be supported by the plan filing fees and annual update fees associated with Regulation XV. Essentially, however, it must be recognized that there are various cost impacts associated with the ordinance strategy, and that anticipation of these is essential to a successful program.

MARKET RESEARCH

In developing a TDM ordinance, substantial knowledge of the travel market and existing problems is vital. Specific questions raised by the ordinance concept go beyond the standard transportation market research issues. For example, it is vital to know the various shares of all trips that are generated by companies of different sizes. How many firms account for the top 50 percent of all peak hour trips made? How many trips are made by people employed by companies of 100 people? What shares of auto trips are generated by employees of different sized firms? What shares of transit trips are generated by employees of different sized firms? How much local travel is there vs. pass-through, i.e. destined for firms within the target jurisdiction vs. outside of it? What is the incidence of subsidized employee parking, and how does this vary by company size? In some cases, notable market research results have arisen from such investigations; for example, in large city CBDs, it appears that relatively more auto trips are generated by small firms than larger ones, despite the fact that most transit marketing endeavors focus on larger firms.

LINKAGE TO OTHER PLANNING AND LAND USE ISSUES

There are clear but as yet unexploited linkages between the ordinance concept and other transportation planning and land use issues. For example, it may make little sense to adopt a traffic reduction ordinance if the development code still promotes or requires provision of excessive parking stalls. Floor area ratios (FAR) and site design requirements should also be considered, prior to the need for trip reduction measures. Development requirements for provision of on-site services, such as employee cafeterias or service centers,

could also be prompted. TDM ordinances are not a panacea. Their institution may and should stimulate consideration of other available and supportive actions that can reduce traffic generation even before it materializes.

INNOVATIVE PROGRAM DEVELOPMENT

Another key to successful implementation of TDM ordinances may be the development of simpler programs for employer use in reducing traffic. For example, Regulation XV may actually place a significant burden on the Southern California RTD for provision of bus passes for employer discounted sales. From the employers view, having to sell monthly bus passes to employees at a discount, collect the non-discounted share, interface regularly with the transit operator, etc. can entail substantial administrative expense. This burden increases dramatically when multiple/private bus operators are involved rather than a single/public agency.

The recent success in New York with the "TransitChek" multi-operator transit voucher, which doesn't change monthly and is simply given rather than sold to employees, would thus be well-applied in Los Angeles of other communities with employer ordinances. Provision of transit information services are another area that needs to be streamlined before widespread employer support can honestly be expected or required.

TRANSITIONAL ROLE OF DEVELOPERS

The role played by new developments has been critical to the emergence of TSM ordinances. Municipalities have relatively more leverage over developers, and they are often required to mitigate the traffic impacts of new projects. Yet, placing inordinate responsibility on developers is not justified, as new projects are only "the last through the turnstile". Recognizing this, when traffic impacts of new developments become an issue, municipalities first focus on the developer but then realize that the problem is broader and requires a more comprehensive approach. Developers may object to bearing inordinate burden and may seek to have existing employers and developments subject to the same requirements so that they do not bear disproportionate costs in relation to the traffic reduction benefits enjoyed by the general community, or so that their development is not at a relative disadvantage in terms of finding tenants (trip reduction requirements can apply to tenants as well as the developer). Special efforts to communicate with developers may be justified.

RECOMMENDATIONS TO UMTA

Special efforts to communicate with developers was noted above as a high-payoff activity. Perhaps more obvious is the value of providing information on the traffic mitigation ordinance concept to localities directly. Some of this has occurred through UMTA's recent series of suburban mobility seminars. Additional means to disseminate information might also be sought.

An on-going cataloging of developments in the field should be maintained. Beyond this, and perhaps more important, is the need to evaluate the effectiveness of the ordinances that now exist. It may be that Pleasanton is

the only one on which much can be concluded at this point, from an actual impact point of view. A thorough report on the Pleasanton experience could be developed and disseminated.

It may also be possible to evaluate some of the other ordinances, from a process if not product perspective at this time. For example, the likely importance of Regulation XV suggests that substantial efforts be commissioned quickly to document the process through which it emerged and also to ensure that data is available to assist the formal tracking of the impacts it has.

Provision of assistance to and networking among the localities interested in pursuing TSM ordinance ideas should also be beneficial. This could help localities take advantage of past experience to anticipate requirements and avoid pitfalls, and would help maximize the number of successful programs implemented.

IV. CASE STUDIES

This section of the report presents summaries of each of the traffic mitigation ordinances reviewed during this study. The case studies are presented in a uniform format to facilitate comparison between jurisdictions.

The summaries reflect the project team's understanding of the ordinances, through review of the ordinances and supporting documentation as well as through discussions with representatives of the jurisdictions. The jurisdiction contacts were not provided the opportunity to review the summaries for accuracy due to the study's time constraints.

CASE STUDY
ALEXANDRIA, VA

JURISDICTION

Alexandria, Virginia

DEMOGRAPHICS

Population 108,000

ORDINANCE STATUS

Adopted May 16, 1987

IMPETUS

The city is experiencing major growth and has no opportunities to increase existing street capacity. Traffic congestion is already severe and will be exacerbated by planned developments.

ORDINANCE DEVELOPMENT

City developed independently after developing a sector plan in an area of the city experiencing development and projecting traffic resulting from the development. The city realized it had no mechanism to control development that would increase traffic congestion.

GEOGRAPHIC COVERAGE

Whole city, 16 square miles

SCOPE

Applies to:

- new retail developments of 40,000 or more square feet
- new office developments of 50,000 or more square feet
- new light industrial developments of 150,000 or more square feet
- new residential developments of 250 or more units
- existing buildings that become part of a project, complex, or development that meets the threshold requirements

GOALS

Mitigate the effects of new development on traffic congestion during peak hours.

TARGET/STAGING

- That 10 to 30 percent of the total number of projected trips during the peak hours use a mode other than single occupant vehicle; or

- That no more than 40 percent of the number of projected single-occupant vehicle trips in the peak direction occur during peak hours

HOURS

6 to 9 am and 3 to 7 pm work days

REQUIREMENTS

Requires that developers apply for special use permit.

Requires that developers conduct a traffic impact analysis that assess the peak traffic impacts of the proposed project which would occur with current commuter behavior.

Requires that developers develop a traffic mitigation plan to reduce site-associated peak auto traffic. The plan, at a minimum, must include the following:

- provision of a transportation coordinator who will administer the plan and coordinate with the city
- the designation of a minimum of 5 percent of the parking spaces for carpools and vanpools
- procedures for enforcement of preferential spaces
- registration of carpools and vanpools with the city
- distribution, display, and promotion of transit services and carpooling programs

The plan must also include a reasonable and effective combination of some or all of the following elements:

- ridesharing incentive programs
- public transit incentive programs
- recommended improvements in public transit which services the site
- bicycle and pedestrian incentive measures
- variable work hour or flexitime programs
- parking incentives/disincentives to reduce reliance on SOV
- use and accessory use design options which reduce reliance on SOV

Assesses developers an annual fee of \$.10 per square foot to fund a traffic management plan. Money that is not spent at the end of the year is to be used towards the next year's program or turned over to the city to fund transportation programs.

Assesses developers a one-time fee of \$.30 per square foot for capital projects.

Requires conduct of an annual survey developed by the city and submission of an annual report that contains survey results.

MANAGEMENT

Developers/Employers

Designation of a transportation coordinator who will manage the plan and act as the coordinator with the city

Jurisdiction

One responsibility of a planner in the Office of Planning

FUNDING

General funds and filing fees

ENFORCEMENT

Applications for special use permit for development must include a traffic management plan. The city council may approve development that does not have an approved traffic management plan.

There are no monetary penalties. Failure to comply with the traffic management plan can result in revocation of the special use permit and the use in question would have to cease operation.

RESULTS

No studies have been conducted to date on the effects on traffic or development. None of the projects covered by the ordinance is completed.

Developers have agreed to purchase buses, operate shuttle service to a rail station, fund increased transit service, and build a new rail station.

Some developers are using their traffic management plans in their marketing efforts to attract tenants.

COMMENTS

The city is wary of limiting the amount of on-site parking because it does not want employees parking on city streets.

CONTACT

Ms. Susan Grosser, City of Alexandria, Department of Community Development, (703) 838-4666

CASE STUDY
BELLEVUE, WA
CBD ORDINANCE

JURISDICTION

City of Bellevue, Washington

DEMOGRAPHICS

Employment, 20,000, doubled in last five years and is expected to double again by 1990

ORDINANCE STATUS

Interim Traffic Ordinance, adopted September 6, 1988, effective through March 6, 1989

IMPETUS

By authority of the State Environmental Policy Act (SEPA), jurisdictions can attach conditions to developments, including traffic mitigation conditions. The City wanted to be empowered by its land use code.

GEOGRAPHIC COVERAGE

CBD

SCOPE

Applies to all new developments in CBD which will generate more than 30 P.M. peak hour vehicle trips

GOALS

- 1) Maintain P.M. peak hour level of service "D" on any portion of city street system affected by proposed project which is currently at level of service "D" or better
- 2) Permit no further degradation of traffic conditions to occur on any portion of city street system affected by the proposed project which is at P.M. peak hour level of service "E" or worse

REQUIREMENTS

- 1) Each development applicant that will generate more than 30 P.M. peak hour vehicle trips must retain qualified consultant to:
 - Conduct traffic study including the following elements:
 - vehicle trip generation - calculated using ITE trip generation manual
 - vehicle trip distribution of development - using the City's traffic model
 - traffic assignment - with assistance of City staff

If no alternative routes to avoid congestion, assume proposed development will increase local area congestion.

- Conduct intersection level of service analysis for:
 - signalized intersections where project projected to add 10 or more peak hour trips - using 1985 Highway Capacity Manual (HCM) Operational Analysis
 - selected unsignalized intersections - using 1985 HCM Unsignalized Procedures

2) Development applicant must take action to meet level of service standards:

- applicant delays development until City or others provide necessary improvements
- applicant constructs or provides full funding for necessary physical or operational improvements
- applicant implements Transportation Management Program (TMP) to reduce peak period vehicle trip generation through changes in travel mode and/or use of flexible work hours

MANAGEMENT

Jurisdiction - Director of Design and Development

ENFORCEMENT

Building permit will not be issued unless project proponent takes specified actions to ensure that level of service standards are met. Property owner must annually provide assurance bond as guarantee that required financial incentives will be provided (in amount equal to cost of maximum incentive levels). Non-compliance will be subject to penalty under civil infractions code.

COMMENTS

Ordinance replaced program of developer conditions established in 1983 which was not very successful.

CONTACT

Kay L. Kenyon, Transportation Planner, City of Bellevue, (206) 462-4077

CASE STUDY
BELLEVUE, WA
NON-CBD ORDINANCE

JURISDICTION

City of Bellevue, Washington

ORDINANCE STATUS

Adopted May 1987

GEOGRAPHIC COVERAGE

Specified Land Use Districts outside the CBD

SCOPE

New development; existing structures only when a substantial remodel is proposed

GOAL

Increase the ridesharing and transit share of work trips to 18 percent and to reduce congestion through flex-time

REQUIREMENTS

Owners of property within specified Land Use Districts with proposed new structural developments must establish a Transportation Management Program prior to initial occupancy of building. Requirements vary with type of development and number of square feet. Requirements include:

- Post Information:
 - general - post ridesharing and transit information in lobby or employee common room on continual basis
 - retail - in addition, provide kiosk for transit and ridesharing information if public enclosed common area is proposed
- Distribute Information:
 - general - distribute ridesharing and transit information annually to all tenants and employees and to new tenants and employees
 - retail (>200,000 gsf) - conduct at least one transit/ridesharing promotion annually
 - residential - distribute ridesharing and transit information annually to all dwelling units
- Provide Transportation Coordinator
 - general - provide Transportation Coordinator services (one Coordinator per 4,000 employees) to publicize availability of ridesharing options, provide annual report to City, act as liaison, and provide ridesharing matching assistance

- Provide Preferential Parking
 - general - provide specially marked parking spaces in preferential location between 7 A.M. and 9 P.M. for registered car and vanpools and enforce through on-site inspection at least 3 mornings per week
- Provide Financial Incentive
 - general - provide \$10/month financial incentive for employees on-site commuting by carpool, vanpool, and transit through discounted Metro bus/vanpool pass, cash bonus, coupon redeemable for gasoline, or equivalent discount in parking charges
 - non-peak bonus - office developments may reduce financial incentive requirement by providing off-peak work hour schedules that encourage workers to arrive outside of the peak period (7:30-8:30 A.M.)
- Provide Guaranteed Ride Home
 - general - provide taxi-scrip system of low cost (<10 percent of cost) rides home who miss their bus or pool because of employer requirement to work late or illness or emergency
- Reporting
 - six months after issuance of Certificate of Occupancy and annually thereafter, property owner must submit report to City describing required TMP components, number on-site employees, expenditures for financial incentives and guaranteed ride home, number bus passes sold, and number of registered car and vanpools

There are no requirements for offices with <5000 gsf, manufacturing with <30,000gsf, professional services with <12,500 gsf, hospitals with <60,000 gsf, retail/mixed retail/shopping centers with <60,000 gsf, and residential/multiple family dwellings <16 units.

MANAGEMENT

Jurisdiction

Director of Design and Development, responsible for specifying submittal requirements and reviewing annual reports from property owners

Property Owners

Transportation Coordinator (1 per 4000 employees), responsible for publicizing the availability of ridesharing options, providing annual report to the City, acting as liaison to the City, and providing ridesharing matching assistance in conjunction with METRO

ENFORCEMENT

Building permit not issued until property owner records an agreement with the City to comply with the ordinance. Non-compliance subject to penalty under Civil Infractions Code.

RESULTS

As of September 1988, City had not used ordinance

COMMENTS

Ordinance replaced program of developer conditions, established in 1983, which was not very successful.

CONTACT

Kay L. Kenyon, Transportation Planner, City of Bellevue, (206) 462-4077

CASE STUDY
BERKELEY, CA

JURISDICTION

Berkeley, California

DEMOGRAPHICS

Population: 103,000

ORDINANCE STATUS

No ordinance. Requirements are instituted under state-mandated environmental impact requirements. The state requires that any development not developed by right must complete an environmental impact report (EIR). Developers must take steps to mitigate environmental impacts. The state law gives California cities the power to require developers to take steps to mitigate traffic impacts of developments.

The city is also developing an ordinance that will cover existing employers and developers.

ORDINANCE DEVELOPMENT

The program is being developed in consultation with a downtown plan committee of developers and merchants. The program has the support of the Chamber of Commerce and the merchants.

IMPETUS

Desire to improve traffic circulation and decrease reliance on single-occupant vehicle.

GEOGRAPHIC COVERAGE

Existing program covers downtown (West Berkeley). The ordinance that is being developed would cover the whole city.

SCOPE

The scope of the EIR process is new developments. The scope of the ordinance will be existing employers. The city's concern is with existing employers as there is little land for new development.

GOALS

Maintain level of service D on downtown streets and to reduce the percentage of peak period single-occupant vehicle (SOV) trips from 50 to 40 percent.

TARGET/STAGING

The city is considering including targets and schedules in the ordinance.

HOURS

The ordinance does not define peak hours. The city's concern is with the lunch and evening peak hours. The congestion during these hours is more

severe than in the morning rush hour because of traffic generated by the university.

REQUIREMENTS

Employers with fewer than 25 employees would submit annual surveys and implement a transportation information program.

Employers with more than 25 employees on one shift would submit an annual TDM program and implementation schedule to meet the citywide SOV reduction goal. The TDM programs may include:

- annual surveys
- transit and ridesharing information
- ridesharing incentives including preferential parking, subsidized/discounted parking, and use of company vehicles
- flex-time
- subsidized transit passes and shuttle bus service
- incentives for bicycle use including mileage reimbursement, secure bicycle lockers, showers, and subsidized bicycle purchases.
- designation of a transportation coordinator

MANAGEMENT

Employer/Developer

Employers with more than 25 employees on one shift would be required to designate a transportation coordinator.

Jurisdiction

The EIR process is administered by the Department of Planning and Community Development. The ordinance would be administered by the Department of Planning and Community Development. The city estimates that ordinance administration would require one full-time equivalent.

Committees

The city regularly consults with the downtown planning committee which is composed of developers and merchants. The city's approach is to gain a consensus.

FUNDING

New and existing developments pay a transportation services fee that is used to fund the city's transportation demand activities. General funds would be used to fund ordinance administration.

ENFORCEMENT

The EIR process is enforced as part of zoning process. The city is considering fines for the ordinance. Regardless of whether the ordinance includes fines, the city wants to rely on good will and the recognition by employers of the potential benefits of the program for participation.

RESULTS

Under the EIR process, the city has required transportation demand management (TDM) plans for two developments. The plans included development of a TDM plan, provision of discounted transit passes and bicycle parking facilities that were secure, and institution of flex-time. The plan for one included shuttle bus service to the Bay Area Rapid Transit (BART) station.

The ordinance is still in development.

Contact

Ms. Sylvia Toth, Senior Planner, City of Berkeley, Department of Planning and Community Development, (415) 644-6534

CASE STUDY
CONCORD, CA

JURISDICTION

Concord, California

DEMOGRAPHICS

Population: 100,000
Employment: 25,000

ORDINANCE STATUS

Adopted October 1985, revised 1987

IMPETUS

Adopted in lieu of a no-growth initiative

ORDINANCE DEVELOPMENT

Ordinance developed in conjunction with a TSM committee composed of developers and large employers. Committee continues to serve as advisory body to City in implementation of ordinance.

GEOGRAPHIC COVERAGE

Whole city (32 square miles)

SCOPE

New non-residential developments with greater than minimum gross floor area:

	minimum
<u>land use</u>	<u>sq. ft.</u>
office	25,000
industrial	50,000
commercial	100,000

Existing non-residential projects with 100 or more employees.

Residential developments of over 100 dwelling units.

Approximately 16,000 employees are covered by the ordinance.

GOALS

Reduce the use of single-occupancy vehicles during peak hours. Goals are established for each development.

TARGET/STAGING

HOURS

4:30 pm - 5:30 pm

REQUIREMENTS

Developers of office, industrial, retail, and hotel/motel projects that will generate more than 100 peak hour employee trips must submit a preliminary TDM plan to the planning department with the application for project approval. The plan must contain:

- a designated TDM coordinator or a contract with a public or private agency for TDM services
- provisions for ongoing training for the coordinator
- conduct of an annual survey
- submission of a TDM report
- proposed strategies to promote flexitime, ridesharing, transit, bicycling, walking, and other transportation modes which may include matching services, preferential parking for car-and vanpools, transit tickets and pass sales, and encouragement of flex-time
- any other strategies to promote alternatives to single-occupant commuting
- an estimate of the number of peak hour vehicle trips using the city-provided table

After project approval, the sponsor shall enter into a TSM agreement with the City which stipulates the following services be provided:

- information services on a quarterly basis
- rideshare services including collection, matching and referral
- transit services including promotions and sales of passes and tickets
- bicycle services including distribution of information

Developers must fund a traffic impact report.

When 60 percent of the project is occupied or one year after initial occupancy, whichever comes first, the developer will conduct the first annual survey. After analysis of the survey by the city, the developer will submit a final TDM plan that accounts for the findings of the survey. The final plan will include:

- a summary of survey findings
- proposed TDM strategies suited to the travel patterns determined by the survey
- an estimate of vehicular trip reductions
- an annual survey

The planning director must approve the final TDM plan.

Developers of residential projects of over 100 dwelling units must submit a residential TDM plan that shall discuss opportunities and strategies for traffic mitigation. The planning commission has the option of imposing conditions.

Existing employers that generate 100 or more peak hour employee trips must submit a TDM. The plan has the same requirements as the preliminary plan for developers.

Each project must annually submit TDM report to the City including:

- amount and kind of information and promotion materials distributed to tenants and employees
- results of TSM activities
- employee population including breakdown by work time

MANAGEMENT

Employer/Developer

Developers must designate a TDM coordinator or contract with a public or private agency to provide TDM services.

Jurisdiction

Administered by the Division of Planning within the Department of Community Development and Public Works. Program has an annual budget of \$70,000 that covers one full-time and one part-time TDM coordinator and program materials.

Committees

A TDM advisory committee serves as an advisory body to City staff and is responsible for TDM Coordinator Training.

FUNDING

The program is funded from a transportation system management fund that consists of interest accrued on the in-lieu parking fund, the net income derived from any city-operated parking facilities and from parking meters, revenue derived from contractual services provided by City for coordination of individual project TDM programs, and any other ongoing, dedicated source the City may establish.

ENFORCEMENT

The incentive for participation is a reduction in off-site street improvement program fees by up to 20 percent.

If the sponsor fails to implement the TDM plan, the city may assume

responsibility for implementing the plan directly or by contracting with others. The sponsor must bear all costs associated with the program.

If two consecutive annual reports demonstrate that the reported reduction is less than 2 percent of the annual goal, the city may require that the developer fund a new traffic impact report and additional off-site street transportation improvements. The levy for new transportation improvements cannot exceed the reduction in off-site street improvement fees given to the developer for submission of a TDM plan.

Failure to comply with ordinance requirements is a violation punishable by the following fines:

- 1st violation \$100
- 2nd violation \$200
- \$300 - each additional violation

COMMENTS

The City has plan, survey, and report forms that developers and employers need only to complete. The forms have proven helpful to developers and employers. The city provides the forms to the coordinators.

Obtaining willing cooperation and stimulating creativity are key to successful implementation. Programs must establish good communication between the city and the coordinators and among coordinators in the beginning. Concord has not issued a single fine.

Developers are finding that good programs can help attract tenants.

Some employers will be reluctant to implement programs.

Cites should offer direction to coordinators. Training of and information-sharing between coordinators is important. City has a coordinator of the year award and sponsors social events for coordinators.

Chevron recently started 7 vanpools.

CONTACT

Ms. Clare Creegan, Marketing Coordinator - Transportation Systems Management, City of Concord, Community Development and Public Works Department, (415) 671-3282

CASE STUDY
CONTRA COSTA COUNTY, CA
COUNTY-WIDE ORDINANCE

JURISDICTION

Contra Costa County, CA

ORDINANCE STATUS

Transportation Systems Management Ordinance adopted October 27, 1987

IMPETUS

Significant growth in county resulted in citizens' initiatives to limit growth; County reacted by developing ordinance to allow growth

GEOGRAPHIC COVERAGE

County-wide except for area covered by Pleasant Hill BART Station Area Plan

SCOPE

Applies to all employers, sponsors of complexes (non-retail, non-residential project in common ownership), and sponsors of projects (residential project containing 13 or more dwelling units) according to the following schedule:

- Effective date (November 27, 1987):
 - employers of 20 or more employees who locate in structure approved after effective date
 - employers who locate in complex occupied by 20 or more employees approved after the effective date
 - sponsors of complexes approved after effective date with 20 or more employees
 - sponsors of projects with 13 or more dwelling units approved after effective date
- 12 months after effective date (November 27, 1988):
 - employers of 20 or more employees located in structures approved before effective date
 - employers in complexes approved before the effective date if complex is occupied by 20 or more employees
 - sponsors of complexes approved before effective date if complex is occupied by 20 or more employees

Employers, complex sponsors, and project sponsors subject to the Pleasant Hill BART Station Area TSM Ordinance are exempt from this ordinance.

GOALS

Primary

- Interstate 80 and Interstate 680/State Route 24 Corridors - ensure that no more than 65% of all employee commute trips occur in single-occupant vehicles

- Outside the Interstate 80 and Interstate 680/State Route 24 Corridors - ensure that no more than 75% of all employee commute trips occur in single occupant vehicles

Alternate

Employers subject to TSM Program requirement whose worksites have one or more of the following characteristics may elect alternate goal:

- 24 hour operations with minimum of 2 separate workshifts during 24 hour period
- nature of business requires use of automobile during each day for majority of employees
- a verifiable TSM Program consistent with alternate objective has been in effect for 6 months

The alternate goals are:

- Interstate 80 and Interstate 680/State Route 24 Corridors - achieve a shift in commute modes and times so that no more than 55 percent of all employee commute trips occur in single occupant vehicles during the A.M. and P.M. peak periods
- Outside the Interstate 80 and Interstate 680/State Route 24 Corridors - achieve a shift in commute modes or times so that no more than 65% of all employee commute trips occur in single occupant vehicles during each of the peak periods

TARGET/STAGING

Primary Goal

- Interstate 80 and Interstate 680/State Route 24 Corridors
 - Year 1 - maximum 80% single occupant vehicle trips
 - Year 2 - maximum 75% single occupant vehicle trips
 - Year 3 - maximum 70% single occupant vehicle trips
 - Year 4 - maximum 65% single occupant vehicle trips
- Outside Interstate 80 and Interstate 680/State Route 24 Corridors
 - Year 1 - maximum 90% single occupant vehicle trips
 - Year 2 - maximum 85% single occupant vehicle trips
 - Year 3 - maximum 80% single occupant vehicle trips
 - Year 4 - maximum 75% single occupant vehicle trips

Alternate Goal

- Interstate 80 and Interstate 680/State Route 24 Corridors
 - Year 1 - maximum 70% single occupant vehicle trips in peak periods
 - Year 2 - maximum 65% single occupant vehicle trips in peak periods

- Year 3 - maximum 60% single occupant vehicle trips in peak periods
- Year 4 - maximum 55% single occupant vehicle trips in peak periods
- Outside Interstate 80 and Interstate 680/State Route 24 Corridors
 - Year 1 - maximum 80% single occupant vehicle trips in peak periods
 - Year 2 - maximum 75% single occupant vehicle trips in peak periods
 - Year 3 - maximum 70% single occupant vehicle trips in peak periods
 - Year 4 - maximum 65 % single occupant vehicle trips in peak periods

REQUIREMENTS

- Employers of 20 or more employees and employers in complexes occupied by 20 or more employees:
 - submit Annual Transportation Survey, including number of employees, scheduled time of arrival and departure for each employee, and the method of commuting for each employee
 - prepare, implement, and submit a TSM Information Program consisting of posting and disseminating materials that describe public transit, ridesharing, and non-motorized commuting opportunities
- Employers of 100 or more employees and employers in complexes occupied by one hundred or more employees:
 - Annual Transportation Survey
 - TSM Information Program
 - prepare, implement, and submit a TSM Program including:
 - designation of Workplace TSM Coordinator
 - any combination of TSM strategies to meet goals including alternative work scheduling, incentives for ridesharing, transit, and non-motorized transportation
- Sponsors of complexes occupied by 20 or more employees:
 - include reference to, and mandatory participation in, the requirements of the ordinance in 1) conditions, covenants, and restrictions at time of recordation, and 2) lease agreements
 - be responsible for meeting the Annual Transportation Survey and TSM Information Program requirements for employers with less than 100 employees if requested
- Sponsors of complexes occupied by 100 or more employees:
 - meet requirements of sponsors of complexes occupied by 20 or more employees (above)

- prepare, implement, and submit a TSM Program including:
 - designation of a Complex TSM Coordinator responsible for implementation of the TSM Program at the Complex
 - any combination of TSM strategies designed to meet the ordinance's goals
 - a program for monitoring and assisting the TSM Programs of employers within the complex
 - an estimate of the cost to implement the TSM program
- Employers and complex sponsors required to have TSM Program must submit an Annual Report including:
 - description of measures taken to comply with ordinance
 - changes proposed for the coming year
 - results of annual survey
 - cost to implement the requirements of ordinance
 - number of off-street parking spaces available to employees
 - number of off-street parking spaces available to non-employees
- Sponsors of residential projects must prepare and implement a TSM Information Program for owners or renters of dwelling units and submit description of program

OPTIONS

Sponsors or projects may qualify for off-street parking reduction upon submittal of a conceptual TSM Program to the Community Development Department with the submittal of an application for the project which identifies TSM measures that will demonstrate attainment of the claimed trip reduction. The design and implementation of a final TSM Program will be a condition of project approval.

MANAGEMENT

Jurisdiction

- County TSM Coordinator (Director of the Community Development Department or designee) is responsible:
 - administering the TSM Program
 - developing rules, regulations, procedures and forms for submittal of Transportation Surveys, Annual Reports, and TSM Programs
 - reviewing and approving TSM Programs
 - serving as staff to TSM Advisory Committee
 - submitting, annually, a summary report to the Board of Supervisors and County TSM Advisory Committee
 - reviewing compliance with ordinance and recommending enforcement action
 - recommending changes to ordinance

Employers/Sponsors

- Workplace Coordinator responsible for implementation of TSM information program and TSM program

Public/Private

- County TSM Advisory Committee:
 - Purpose - to monitor implementation of TSM requirements and to serve as an advisory body to the TSM Coordinator and Board of Supervisors
 - Composition - 7 members, including 1 member of labor organization, 1 member of transit operator, 2 complex sponsors, and 3 employers
 - Functions - make recommendation on appeals; advise Board and TSM Coordinator; recommend changes to ordinance; and make recommendations to Board on formation of Transportation Management Associations within the County

ENFORCEMENT

Failure to provide Surveys, Annual Reports, TSM Information Program, or TSM Programs is an infraction, punishable by fine, as follows:

- \$100 for first violation
- \$200 for second violation
- \$500 for each additional violation of same provision

Each day of failure to comply constitutes a separate violation.

Failure to implement a TSM Program is referred to the County Board of Supervisors for:

- time extension
- penalty (fines as noted above)

Failure to achieve the goals of the ordinance is not a violation. The TSM Coordinator may require a revised TSM Program, however, in employer or complex sponsor is unable to show that reasonable progress is being made.

In addition, ordinance may be enforced by any civil action authorized by the Board of Supervisors.

COMMENTS

As of August 1988, County had not hired TSM Coordinator

CONTACT

Steve Goetz, Transportation Planner, Contra Cost County, (415) 646-2134

CASE STUDY
CONTRA COSTA COUNTY, CA
PLEASANT HILL BART STATION AREA ORDINANCE

JURISDICTION

Contra Costa County, CA

ORDINANCE STATUS

Pleasant Hill BART Station Area Transportation Systems Management
Ordinance adopted 6/24/86

IMPETUS

Significant increase in development activity and new employment and housing in area

GEOGRAPHIC COVERAGE

Area covered by Pleasant Hill BART Station Area Specific Plan

SCOPE

Includes employers and project sponsors of new non-residential development (or development with building permit issued after 12/1/82) within unincorporated area within 3000 feet of the Pleasant Hill BART Station. Excludes single buildings used exclusively for retail sales.

OBJECTIVES

To reduce traffic impacts by reducing the number of automobile trips, daily parking demand, and total vehicle miles per person traveled that might otherwise be generated by commuting. Specific objectives include:

- Primary objective - achieve shift in commute modes so that no more than 65% of all employees commute to and from work in single occupant vehicle
- Alternative objective - for employers that demonstrate that primary objective is not feasible, achieve shift in commute modes so that no more than 55% of all employees commute during AM and PM peak periods in single occupant vehicle

TARGET/STAGING

- Primary objective - maximum percentage single occupant vehicle commuting:
 - First year - 80%
 - Second year - 75%
 - Third year - 70%
 - Fourth year - 65%
- Alternate objective - maximum percentage single occupant vehicle commuting during peak periods:
 - First year - 70%
 - Second year - 65%

- Third year - 60%
- Fourth year - 55%

REQUIREMENTS

- All employers in project - required to:
 - annually submit transportation survey to County TSM Coordinator including information on number and commute modes of employees
 - prepare and implement TSM program, including:
 - designation of workplace coordinator responsible for implementing program
 - program for posting and disseminating informational materials relating to transit, ridesharing, and non-motorized commute modes
 - combination of TSM strategies to achieve ordinance objectives, such as:
 - organization of vanpools, carpools, or other ridesharing programs
 - subscription bus service for employees
 - transportation incentives
 - parking management
 - amenities (i.e., bicycle lockers, showers, transit shelters, shuttle service or other incentives for alternative travel modes)
 - parking preference or incentives for ridesharing or use of transit
 - estimate of cost to implement program
- Non-residential project sponsors - required to prepare and implement TSM program including an enforcement program with a surety bond, letter of credit, or other financial assurance guaranteeing implementation of TSM program
- Residential project sponsor - required to prepare and implement TSM programs and submit surveys and Annual Reports, if obligated by conditions of approval

PROGRAM MONITORING

All employers and project sponsors annually submit report, including Transportation Survey, to County TSM Coordinator

MANAGEMENT

Jurisdiction

- County TSM Coordinator (Director of Community Development) responsible for:
 - reviewing/approving TSM programs
 - developing guidelines, forms, procedures for submission of

- transportation surveys, annual reports, and TSM programs
- administering and implementing ordinance
 - annually submitting summary report to Board of Supervisors and TSM Advisory Committee describing program results

Public/Private

- TSM Advisory Committee:
 - serves as advisory body to Board of Supervisors and County TSM Coordinator
 - composed of representatives of employers, residential developments, transit systems, Contra Costa Centre Association, City of Walnut Creek, and City of Pleasant Hill
 - responsible for 1) advising Board and County TSM Coordinator, 2) making recommendations on appeals, 3) advising any party on TSM matters, and 4) recommending changes to the ordinance

Developers

- Contra Costa Centre Association, a non-profit organization composed of individual developers within the Pleasant Hill BART Station Specific Plan area, was formed in 1985 to implement and manage shared commitments including the TSM programs

ENFORCEMENT

- Approval of TSM Program - no building permit issued until program approved
- Failure to submit or have approved a TSM Program after notification is a misdemeanor, punishable by up to 6 months in jail and/or a maximum fine of \$1000, if convicted
- Failure to implement approved TSM Program
 - notice sent requiring employer or project sponsor to implement TSM program in 30 days and report on program in 90 days
 - if not implemented after 90 days, County TSM Coordinator will implement program at cost to employer or project sponsor
 - failure is an infraction, punishable, if convicted by:
 - up to \$100 for first violation
 - up to \$200 for second violation
 - up to \$500 for each additional violation
- Failure to achieve objective
 - required to submit revised TSM Program if unable to meet objectives by end of second year
 - required to implement mandatory TSM Program developed by County TSM Coordinator if unable to meet objectives after 2nd revised TSM program has been implemented

RESULTS

According to Contra Costa Centre Association:

- by June 1987, 20% commuting other than single occupant vehicle
- by June 1988, 18.1% commuting other than single occupant vehicle

PROBLEMS

Currently development is approximately 10% of buildout. TSM program may be more effective when area is denser and there is more opportunity for ridesharing.

Currently, certain amenities, such as restaurants are not available. The program may be more effective when restaurants and other services are provided and employees don't need their vehicles to travel to lunch.

CONTACT

Steve Goetz, Transportation Planner, Contra Costa County, (415) 646-2134

Maridel Moulton, Executive Director, Contra Costa Centre Association, (415) 935-6337

CASE STUDY
EL SEGUNDO, CA

JURISDICTION

El Segundo, California

DEMOGRAPHICS

Resident Population: 15,000

Daytime Population: 95,000

ORDINANCE STATUS

Adopted November 19, 1985

IMPETUS

Traffic to and from large employment sites

ORDINANCE DEVELOPMENT

The city conducted public planning sessions and public hearings.

GEOGRAPHIC COVERAGE

City's commercial and manufacturing zones

SCOPE

Applies to (1) new developments which will have 200 or more employees during daytime hours, (2) expansions which will result in increase in gross floor area of 25 percent or more and will have 200 or more employees during daytime hours, (3) existing and future employers of 200 or more employees at a common business location during daytime hours, and (4) multi-tenant complexes with more than 200 employees during daytime hours. If actual counts or projections are not available, developments exceeding the following building sizes shall comply:

- office/research and development uses of 48,000 gross square feet or more
- manufacturing/industrial/warehouse developments of 100,000 square feet of more

Projects that develop at less than 75 percent of the code-permitted maximum building floor area are exempt from the ordinance. Subsequent expansions that result in a site exceeding the 75 percent limit must comply with the ordinance.

Businesses that are not office or industrial uses and "neighborhood-serving" businesses are exempt.

GOALS

Reduce traffic congestion, air pollution, and energy consumption resulting from employee commuting by providing facilities to encourage and accommodate the use of ridesharing, transit, pedestrian, and bicycle commuting as alternatives to single occupant motor vehicle trips.

TARGET/STAGING

The target for employers is a 20 percent reduction in the base traffic level.

REQUIREMENTS

The ordinance requires the following from new developments:

- high-occupancy vehicle (HOV) staging area.
- preferential parking for carpools and vanpools of at least 15 percent of total spaces. Developer may reduce the number of required parking spaces by one space for every preferential space up to 10 percent.
- one or more of the following sized to serve at least 20 percent of the work force:
 - on-site amenities such as restaurants, retail/personal service, and recreation establishments
 - operation of a midday shuttle to areas offering amenities

(This requirement does not apply to developments within 1,000 feet of an existing retail/shopping center)

- transit support facilities (optional) which promote transit use. If offered, the number of total parking spaces may be reduced up to 1 percent for bus transit facilities and up to 2.5% for rail transit and the number of preferential parking spaces may be reduced by up to 5 percent.
- showers, lockers, and bicycle parking (optional). If offered, the number of preferential parking spaces may be reduced by up to 3 percent and the total number of parking spaces may be reduced up to 1 percent.

Developers and employers may jointly submit an alternative traffic demand management (TDM) plan which includes programs and physical facilities designed to reduce employee commute trips. Measures may include reasonable combination of employer directed carpool, vanpool, or buspool programs, rideshare subsidies, flexitime and parking reductions. The plan must be submitted to and approved by the planning director prior to issuance of the building permit. The agreements run with the land.

The property owners or managers of multi-tenant complexes are required to designate a complex TDM coordinator.

Employers with 200 or more employees are required to submit a TDM plan to the planning director for approval. The plans, at a minimum, must include:

- an employee transportation coordinator
- informational and promotional programs
- preferential parking

- "personalized ridesharing program" with matching services and personal conversations and follow-up
- submission of a monitoring report every three years

Employers of less than 200 employees in multi-tenant complexes can either:

- develop an individual TDM plan
- participate in the complex plan
- provide employees with the services of a coordinator, provide information to employees regarding alternative ways to commute to work, provide a commuter matching service, and designate preferential parking

MANAGEMENT

Employer/Developer

Multi-tenant complexes with more than 200 employees are required to have a complex coordinator designated by the property owner/manager. This person serves as liaison to major employers in complex, and is the central information, reporting and coordinating source for the complex.

The ordinance does not require the designation of a traffic system management coordinator for each employer. Most large employers have coordinators.

Jurisdiction

Administered by the Department of Community Service, Planning Division. One planner is dedicated to managing the program.

FUNDING

A filing fee may be established by council resolution to cover the cost of program administration.

ENFORCEMENT

Enforcement for developers is tied to the permit process. Issuance of the building permit and certificate of occupancy are contingent upon compliance. The city conducts a field inspection prior to issuance of the certificate of occupancy.

Enforcement for employers is tied to the business license process. Employers are required to have a TDM plan on file to obtain or renew a business license.

The city may require annual compliance audits.

City uses parking incentives to gain compliance. Current zoning has floor-to-area ratio (FAR) parking requirements. Existing employers can petition to have their parking requirement reduced by 1 percent for each 1 percent proposed trip reduction by up to 15 percent. The incentive has enabled several employers to expand their facilities.

RESULTS

No studies have been conducted to date.

CONTACT

Mr. Jeff Fujimoto, City of El Segundo, (213) 322-4670

CASE STUDY
GOLDEN TRIANGLE AREA
SANTA CLARA COUNTY, CA

JURISDICTION

Golden Triangle Area - cities of Milpitas, Mountain View, Palo Alto, San Jose, and Sunnyvale, and the County of Santa Clara, California

ORDINANCE STATUS

Model Transportation Demand Management Ordinance in draft

IMPETUS

Estimate that peak period traffic in Golden Triangle Area will increase 25 to 35 percent in next 15 years

ORDINANCE DEVELOPMENT

Program and draft ordinance developed by Golden Triangle Task Force

GEOGRAPHIC COVERAGE

Cities of Palo Alto, Mountain View, Sunnyvale, Milpitas, northern San Jose and unincorporated parts of the County of Santa Clara

SCOPE

Existing and future employers with 100 or more employees, including the City, and new developers in multi-tenant complexes with 500 or more employees

GOAL

Reduce traffic impacts within the City (cities and County of Golden Triangle Implementation Area) by reducing the number of commute generated vehicle trips and the total vehicle miles traveled

TARGET/STAGING

Achieve non-drive-alone commute rates as follows:

- 24% by 1992
- 35% by 2000

1986 base-line non-drive-alone rate was 17%.

REQUIREMENTS

- Each employer of 100 or more employees must annually submit Transportation Demand Management Survey Report with information on number of employees by work hours and work site, commute modes, TDM services offered, cost of TDM services, number vehicles departing work site during peak period, number of occupied employee parking spaces one hour prior to peak period

- Each new development (100 or more employees) and complexes (500 or more employees), in order to receive development permit, must:
 - submit the Annual TDM Survey
 - develop design features including:
 - preferential car or vanpool parking area
 - showers, personal lockers, bicycle lockers, and bicycle parking areas
 - sheltered loading/unloading areas for users of transit, carpools, and vanpools
 - sidewalks for pedestrian access to and from streets and buildings
 - develop TDM program designed to meet goal of 35% participation within 5 years of building occupancy (annual 3% increase over rate at time of initial survey), which includes the following components:
 - appointment of a Transportation Coordinator
 - dissemination to employees of information on commute alternatives
 - services to employees, such as:
 - rideshare matching
 - preferential parking for rideshare vehicles
 - carpool and vanpool subsidies
 - transit ticket sales
 - transit subsidies
 - shuttle to transit line
 - flexible work hours for people who do not drive alone
 - compressed work weeks
 - work at home programs
 - telecommuting

All employers are encouraged to implement a voluntary TDM program consisting of commute coordinator, information program, and minimum 2 TDM services.

MANAGEMENT

Public/Private

- TDM Coordinating Council, composed of public and private executives, will provide policy direction to area-wide program

Jurisdictions

- Central TDM Implementation Agency will be responsible for employee outreach, technical assistance, commute coordinator training, production of marketing materials, reporting and monitoring, setting up pilot projects and Transportation Management Associations
- Jurisdictions may elect to have city staff provide employer outreach services

Developers/Property Owners

- Transportation Coordinators responsible for TDM Program implementation

FUNDING

Each participating jurisdiction will finance the regional services of the Central TDM Implementation Agency (estimated annual base budget of \$800,000)

ENFORCEMENT

Building permit not issued until property owner submits a satisfactory TDM program to the City.

Failure to comply with mandatory provisions of ordinance (i.e., submit Annual Report) is misdemeanor punishable by \$250 fine for each violation.

Violations of conditions of development approval (i.e., failure to implement TDM Program) subject to fine of \$1000 per each violation.

COMMENTS

Golden Triangle Task Force recommends that employer based programs should be mandated if voluntary efforts are unproductive

CONTACT

Shanna O'Hare, TSM Manager, City of San Jose, (408)277-4217

CASE STUDY
MARICOPA COUNTY, AZ

JURISDICTION

Maricopa County, Arizona

STATUS

To become effective December 31, 1988

IMPETUS

Mandated by Arizona Legislature in Omnibus Air Quality Bill of 1988

GEOGRAPHIC COVERAGE

Incorporated and unincorporated areas of County (State bill requires traffic reduction measures only in areas designated by State and EPA as non-attainment of ambient air quality standards; Maricopa County elected to apply requirements throughout County)

SCOPE

Applies to major employers, defined as follows:

- December 31, 1988 through September 30, 1989 - employers that employ 500 or more full time employees at worksite during 24 hour period for at least 6 months
- September 30, 1989 through December 31, 1989 - employers that employ 200 or more full time employees at worksite during 24 hour period for at least 6 months
- December 31, 1989 and thereafter - employers that employ 100 or more full time employees at worksite during 24 hour period for at least 6 months

GOALS

5 percent reduction in single occupant vehicle commuting for each of first two years. The Travel Reduction Program Regional Task Force will recommend appropriate goals for third year and beyond.

REQUIREMENTS

Major Employers

- provide each regular employee, on an annual basis, and each new employee at time of hire with information on alternative mode options and travel reduction measures
- participate in annual survey and reporting effort
- prepare and submit travel reduction plan (TRP) including:
 - designation of Transportation Coordinator responsible for implementing travel reduction program

- description of employer information programs and other travel reduction measures completed in previous year
- description of travel reduction measures to be undertaken in coming year, which may include:
 - commuter matching service to facilitate employee ridesharing
 - provision of vans for vanpooling
 - subsidized carpooling or vanpooling
 - use of company vehicles for carpooling
 - preferential parking for carpool or vanpool users
 - cooperation with other transportation providers to provide additional regular or express service to the work site
 - construction of special loading and unloading facilities for transit and carpool and vanpool users
 - cooperation with political subdivisions to construct walkways or bicycle routes to work site
 - provision of bicycle racks, lockers and showers for employees who walk or bicycle
 - provision of special information center where information on alternate modes and other travel reduction measures is available
 - full-time or part-time work at home program
 - program of adjusted work hours which may include compressed work weeks and flextime (provided they do not interfere with or discourage the use of ridesharing and transit)
 - program of parking incentives
 - incentives to encourage employees to live closer to work
 - other measures designed to reduce commute trips

Non-major Employers are encouraged to participate in data collection and information dissemination efforts and in preparation of TRP on a voluntary basis with assistance of the Task Force

MANAGEMENT

Jurisdiction

Travel Reduction Program Staff will be part of the Department of Health Services, Division of Public Health, Bureau of Air Pollution Control. Staff will include 10 positions and will be responsible for performing survey work, plan review and approval work, and program monitoring.

Travel Reduction Program Regional Task Force

Regional Task Force will be appointed by the Board of Supervisors. The Task Force will be responsible for overseeing the program to assure consistency and uniformity and for plan approval and enforcement.

Travel Reduction Board

The Travel Reduction Board will be the Air Pollution Advisory Council.

Regional Public Transportation Authority (RPTA)

The county will contract with the RPTA to do majority of advertising and public information work, training and technical assistance to employers

FUNDING

\$546,274 grant from Air Quality Fund of Arizona Department of Environmental Quality will support program from October 1, 1988 through June 30, 1990. Beyond 1990, the probable source of funding will be user fees to be established in January 1990.

ENFORCEMENT

The following actions constitute violations of the trip reduction requirements:

- failure to collect or supply information
- failure to disseminate information on alternate modes and other travel reduction measures
- failure to designate a Transportation Coordinator
- failure to submit satisfactory TRP
- failure to implement approved plan or perform revision as requested by Task Force

Each day of non-compliance constitutes a separate violation, punishable by the following fine structure:

- up to \$100 for the first violation
- up to \$200 for the second violation
- up to \$300 for each additional violation

Failure to meet travel reduction goals does not constitute a violation if the employer is attempting in good faith to meet the requirements. Employers that fall below the regional target in any year must implement at least 2 specific travel reduction measures in the first year and at least 3 specific measures in the second year. After the second year, the Task Force may recommend additional actions for specific employers.

COMMENTS

The requirements of the State Bill will replace several voluntary efforts underway within the County, particularly in Phoenix, including:

- voluntary travel reduction program promoted by the RPTA since 1986
- voluntary Rideshare program in Phoenix metropolitan area, sponsored by the Maricopa Association of Governments and operated by RPTA
- voluntary "no drive day" campaigns conducted by the RPTA and the Phoenix Metropolitan Chamber of Commerce

CONTACT

Dr. Harvel Alishouse, Air Quality Advisor, Maricopa County Department of Health Services, (602) 258-6381

CASE STUDY
MONTGOMERY COUNTY, MD

JURISDICTION

Montgomery County, Maryland

ORDINANCE STATUS

Adopted November 1987

IMPETUS

Concern over the traffic generated by redevelopment of the Silver Spring central business district (CBD)

ORDINANCE DEVELOPMENT

Developed by county after extensive studies of CBD and surrounding areas. Extensive public discussion of the ordinance occurred during ordinance development.

GEOGRAPHIC COVERAGE

Silver Spring CBD

SCOPE

Applies to:

- new non-residential developments of 1,000 square feet or more
- employers of 25 or more employees (the maximum number of employees on any shift)

GOALS

Provide traffic capacity for redevelopment of the Silver Spring CBD.

TARGET/STAGING

Existing employers:

- 25 percent transit
- 5 percent walk
- 1.3 auto occupancy

New developments:

- 30 percent transit
- 5 percent walk
- 1.3 auto occupancy

Goals are contained in county's annual growth policy so they can be revised.

HOURS

7 - 9 A.M. and 4 - 7 P.M.

REQUIREMENTS

Requires participation in an annual survey of commute patterns by all employers.

Requires employers with 25 or more employees to develop and submit to the county department of transportation traffic mitigation plans.

Requires developers to execute a traffic mitigation agreement ensuring compliance with the commuting goals specified in the annual growth policy.

MANAGEMENT

Public/Private

Transportation Demand Management Advisory Committee, composed of representatives of employers and the business community, CBD residents or workers, and representatives of the county. County representatives are non-voting members. Members are appointed by the county executive and confirmed by the county council.

Jurisdiction

Staff of 4 headed by a manager and resident in the county department of transportation. The budget for FY88 was \$778,900.

Developers/Employers

Ordinance does not specify that a traffic coordinator be assigned. However, the county looks for a coordinator in submitted plans.

FUNDING

Allows the use of parking fees from county lots in Silver Spring for partial funding of transportation demand management. (The county controls two-thirds of the parking in the Silver Spring district.)

ENFORCEMENT

The county must withhold building permits until the county and the developer execute a traffic mitigation agreement. The agreement runs with the land.

If goals are not met, the employer or developer must revise its program. The county can place mandatory requirements on the employer if goals are not being met.

RESULTS

No studies have been conducted to date on the effects on traffic or development. The county believes that the ordinance has not discouraged development. Instead, it believes that developers realize that the ordinance

has made the amount of new development (2 million square feet of office space, 1 million square feet of retail space, 1 hotel, and several thousand housing units) possible.

New developments all have preferential parking for car/vanpools and have agreed to charge for parking.

COMMENTS

Obtaining valid survey results is a problem. The surveys are biased toward transit riders and ridesharers.

Developers push for less specificity. The county requires specificity in programs.

The county has set a cap on the number of long-term parking spaces in the Silver Spring CBD.

The county thinks that the key to making the ordinance work is getting developers to charge for parking.

CONTACT

Mr. Richard Hawthorne, Maryland-National Capital Park and Planning Commission, (301) 495-4525.

CASE STUDY
NORTH BRUNSWICK, NJ

JURISDICTION

North Brunswick Township, New Jersey

DEMOGRAPHICS

Population 27,000

ORDINANCE STATUS

Adopted October 5, 1987

IMPETUS

Township is at the beginning of the Route 1 corridor that is experiencing tremendous growth and is severely congested.

ORDINANCE DEVELOPMENT

Developed by a task force comprising representatives of the local and county government, employers, and developers. The task force conducted a seven-month study.

GEOGRAPHIC COVERAGE

Whole township, 11.2 square miles

SCOPE

Applies to:

- existing businesses with 50 or more employees
- new residential developments of 20 or more units
- new non-residential developments of 15,000 or more square feet
- all planned developments

Exempts following businesses:

- eating and drinking establishments
- retail businesses and shopping centers
- grocery stores
- hotels
- security service
- other businesses whose employees do not commute during the normal rush hours

GOALS

1. Reduce peak-hour traffic movements generated by major employers and developments.
2. Enlist participation of other jurisdictions in the route 1 corridor in the program.

TARGET/STAGING

Existing Businesses

Reduce traffic volumes so that:

- total peak period trips amount to less than 60 percent of work force (total peak period trips/ work force is less than 60 percent)
- concentration of peak period trips in any 15-minute interval is less than 40 percent of work force (peak period trips in 15-minute interval/ work force is less than 40 percent)

Non-residential Developments

Reduce the number of anticipated peak hour auto trips to 70 percent of what would be made if all the trips were made in single-occupant vehicles.

HOURS

Peak Period

7:20 A.M. to 8:40 A.M. and 3:50 P.M. to 5:10 P.M.

Rush Hour

7:30 A.M. to 8:30 A.M. and 4:00 P.M. to 5:00 P.M.

REQUIREMENTS

Businesses

Requires the following from non-exempt new and existing businesses with 50 or more employees:

- annual survey of commuting habits with a minimum response rate of 75 percent
- annual report received by March 15 with the following information:
 - number of employees beginning and ending work by 15 minute time slots between the hours of 7-9 am and 3:30-6 pm.
 - number of employees who are commuting to work by means other than single-occupant vehicles

- number of employees participating in an alternative work hours program
- employee residency totals by municipality
- measures taken to reduce traffic

Requires a traffic reduction plan of existing non-exempt businesses with 100 or more employees that have:

- in excess of 60 percent of work force is scheduled to start or end work in the peak period
- in excess of 40 percent of work force is scheduled to begin or end work in any 15-minute period in the peak period

New Non-residential Developments

Requires submission of a traffic reduction plan to the Planning Board at the time of submission for site plan approval. The plan can incorporate any of the following:

- designation of preferred parking for car- and vanpools
- construction of shelters to facilitate traffic mitigation measures
- provision of shuttle bus service to and from the train station in the morning and afternoon
- establishing an in-house or third-party ridesharing or vanpooling program
- establishing an information center to coordinate ridesharing and vanpooling among smaller businesses in a complex

New Residential Developments

For developments of 20 or more units, developers must conduct a workplace/commutation survey to determine workplace location; work schedule characteristics; number of children; and interest in vanpooling, park-and-ride facilities, shuttle bus service to the train station or park-and-ride facilities. Requirements for completing the survey must be in the contract of sale and must be completed on or before the time of closing.

For developments of 50-200 units, developers must provide a 15-car vanpool parking lot.

For developments of 201-350 units, developers must provide a 30-car vanpool parking lot.

For developments of more than 350 units, developers must construct park-and-ride facilities at a ratio of one parking space per 10 units.

The lots can be dedicated to the township or maintained by the developer.

Warehousing and Distribution Developments

All new and existing warehousing and distribution facilities in excess of 20,000 square feet must submit an annual report on the average number of trucks entering and leaving the site daily and between 7 and 9 A.M. and 4 and 6 P.M.

MANAGEMENT

Developers/Employers

Requires designation of a traffic coordinator to act as liaison, and to implement surveys and traffic reduction plans.

Jurisdiction

Plan to staff an Office of Traffic Management within the Office of Administration. Staff will include:

- traffic management coordinator
- 2 part-time consultants
- clerical staff

FUNDING

Funded with general revenues.

ENFORCEMENT

For the developer to receive a building permit, applications for development must include a traffic management plan that is reviewed by the Office of Traffic Management or certified by an areawide transportation management association or similar firm. The Office of Traffic Management can recommend that the planning board accept or reject the site plan due to its traffic impacts. The certification states that the plan should meet intended goals.

Failure to achieve trip reduction goals is not a violation provided approved plan was implemented in good faith.

If traffic reduction goals are not being met, the Office of Traffic Management can require that businesses or developers amend their plans.

Violations include failure to submit annual surveys, annual reports or traffic reduction plan, failure to revise plan, and failure to achieve 75% participation in survey.

Violators are subject to fines of up to \$500 per month for failure to submit required reports or plans.

RESULTS

No studies have been conducted to date.

Recently a developer agreed to build a park-and-ride lot for 100 cars.

A major employer started a vanpool program and instituted flex-time.

COMMENTS

The Township recognizes that an overall program of traffic management requires regional action. A lot of traffic on North Brunswick is passing through to other jurisdictions. The Township is taking action to disseminate information on its program and is encouraging other localities in the region to get involved in transportation demand management.

Several neighboring communities are looking into development of TDM ordinances.

CONTACT

Mr. Paul Keller, Town Administrator, (201) 247-0922

CASE STUDY

OXNARD, CA

JURISDICTION

Oxnard, California

DEMOGRAPHICS

Population: 120,000

ORDINANCE STATUS

In draft

IMPETUS

City council has established a goal of maintaining a level of service of C at all intersections. The city realized it could not build additional facilities to maintain the level of service so it is drafting the ordinance to reduce demand.

ORDINANCE DEVELOPMENT

Have met with developers and employers but do not have a formal ordinance advisory or development committee.

GEOGRAPHIC COVERAGE

Applies to the whole city

SCOPE

New and existing commercial, office and industrial developments and employers with more than 10 employees. Developers/employers will be phased into the program as follows:

- 30 days after appointment of City Ridesharing Coordinator - all new commercial, office and industrial developments with 50 or more employees
- 90 days after appointment of City Ridesharing Coordinator - all existing commercial, office and industrial developments with 100 or more employees
- 6 months - new development with 10 or more employees
- 1 year - all new development with 50 or more employees
- 18 months - all existing development with 10 or more employees

GOALS

Maintain a level of service C at all city intersections.

TARGET/STAGING

The draft ordinance does not contain targets and schedules. The city is considering adding them to the draft ordinance.

HOURS

7:30 am to 8:30 am and 4:00 pm to 6:00 pm

REQUIREMENTS

Employers/developers with 10 or more employees at a single location not located in a complex will:

- conduct and submit the results of an annual employee commute survey. The information will include:
 - number of employees
 - zip code of each employee's residence
 - commute mode of each employee
 - maximum number of employees on each shift
 - number of employees arriving and leaving by time slot
- post and distribute materials provided by the city that promotes alternatives to commuting alone

In addition to the survey and information dissemination requirements, employers/developers with 50 or more employees at a single location not located in a complex will develop and implement a TDM program. The city must approve the program. The program will include a combination of TDM measures such as promotion of ridesharing, transit, and non-vehicular commute modes; alternative work hour programs; and coordination with other employers.

In addition to the survey, information dissemination, and TDM program requirements, employers/developers with 100 or more employees at a single location and all employers within a complex will appoint a TDM coordinator and must submit annual reports. The annual report must contain:

- a description of the employer/work site including the type and amount of land uses, shift times, number of employees on each shift, number and type of parking spaces, and the on-site facilities to encourage use of alternative travel modes
- a description of the previous year's TDM activities, including Employee Transportation Coordinator activities, marketing and promotion, and monitoring
- the results of the employee surveys
- an evaluation of the last year's program and recommended changes for the new year's program

The ordinance contains equivalent building sizes for the three employee thresholds for the following uses:

- office (excluding medical)
- hospital and medical offices
- commercial

- industrial
- warehouse

MANAGEMENT

Employer/Developer

Employers/developers with 100 or more employees at a single location and all employers within a complex are required to appoint a TDM coordinator responsible for summary implementation of the TDM program and coordinating with and submitting an annual report to the City Ridesharing Coordinator.

Jurisdiction

Will be administered by the Ridesharing Coordinator within the Department of Public Works. The Ridesharing Coordinator will be responsible for:

- providing staff support and coordinating activities for TDM Task Force
- developing and distributing informational/promotional materials to employers
- providing direct support to employers in developing TDM plan
- coordinating with City departments, and transit agencies
- reviewing and evaluating employers and complexes' TDM programs, employers' TDM information programs, and employers' surveys and annual reports
- participating in and coordinating with any regional TDM activities, including Commuter Computer programs
- preparing and presenting annual reports to City Council and Planning Commission regarding TDM progress

Public/Private Task Force

The city plans to form a TDM Task Force to ensure that the measures and requirements of the ordinance are implemented consistently with its purpose and intent. The task force will be composed as follows:

- six executives or managers from city employers, or complex or property management companies
- one representative from the city who is an elected official or a manager
- one representative from South Coast Area Transit
- the city ridesharing coordinator

The task force will be responsible for the following:

- monitoring results of employees' TDM programs
- coordinating TDM efforts of all employers
- working with City to coordinate TDM efforts with local and regional transit authorities
- seeking cooperation and assistance of neighboring communities and regional agencies to achieve TDM goals
- recommending improvements in City services and facilities to assist employers in meeting goals

FUNDING

Fines will be used to help fund TDM activities.

ENFORCEMENT

The ordinance provides for fines for failure to:

- provide survey data and annual reports
- implement information or TDM programs
- designate an employee transportation coordination

The fines shall not exceed \$500 for the first infraction, \$1,000 for a second, and \$2,000 for a third. Each failure constitutes separate violation. Fines will be used to bring employee into compliance.

RESULTS

Not as yet implemented.

CONTACT

Mr. Robert Weithofer, City of Oxnard, Department of Public Works, (805) 984-4696

CASE STUDY
PASADENA, CA

JURISDICTION

Pasadena, California

DEMOGRAPHICS

Population: 130,000

Employment: 85,000 of which 25,000 are residents

ORDINANCE STATUS

Adopted July 1986

IMPETUS

Planning staff and board concern that some action was necessary to start dealing with the traffic caused by new projects.

ORDINANCE DEVELOPMENT

Developed over several month period involving negotiations with a committee appointed by the Chamber of Commerce.

GEOGRAPHIC COVERAGE

Whole city, 25 square miles

SCOPE

Applies to new developments and existing facilities that increase their gross floor areas by 25 percent. It has provisions that apply to two employee thresholds: those with 100 or more employees and those with 500 or more employees.

The following project sizes are considered equivalent to the 100 employee threshold:

- business and professional offices: 25,000 square feet
- hospitals and medical/dental offices: 40,000 square feet
- commercial and industrial use: 50,000 square feet
- warehousing and storage: 100,000 square feet

The following project sizes are considered equivalent to the 500 employee threshold:

- business and professional offices: 125,000 square feet
- hospitals and medical/dental offices: 200,000 square feet
- commercial and industrial use: 250,000 square feet
- warehousing and storage: 500,000 square feet

When calculating employee equivalents of additions, the new and existing space will be used.

GOALS

Encourage the use of modes other than single occupant vehicles.

Encourage alternative work hours which serve to reduce peak hour demands on the street network, parking facilities, and transit systems.

HOURS

7:30 to 8:30 am and 4:30 to 5:30 pm

REQUIREMENTS

For developments with 500 or more employees, submission of traffic demand management plan for approval by the city. (Minor developments, i.e., with less than 500 employees, are encouraged to submit TDM plan).

For developments with 500 or more employees, provisions of an on-site traffic coordinator by a developer or a complex.

Set aside of at least 10 percent of preferential employee parking spaces for carpools.

For developments with 500 or more employees, provision of access (minimum 7'2" vertical clearances) and preferential parking for vanpools. The number of vanpool parking spaces shall be at least 1 percent of the employee parking spaces.

Provision of computer matching services from Commuter Computer for all employees annually and new employees upon hiring. In developments of 500 or more employees, computer matching may be performed by the developer/employer or any other agency, firm, or consultant with ridesharing experience.

Provision of bicycle parking facilities for use by employees or tenants at a rate of three for each 200 employees or fraction thereof.

Provision of signs in employee parking areas providing information on alternative commute forms and the operation of a commuter information center with current transit maps, schedules, and ridesharing promotional material provided by Commuter Computer and the Southern California Regional Transit District.

For developments with 500 or more employees, provision of carpool and vanpool loading areas large enough to accommodate a number of waiting vehicles equivalent to 1 percent of the required parking for the project. The loading areas should be located at the points of primary employee/tenant access from the parking areas and/or city streets adjacent to the building.

Improvements to bus stops as determined by the city traffic and transportation engineer including bus pullouts, bus pads, and right-of-way for bus shelters for developments of 500 or more employees located along high traffic volume streets and established bus routes.

Conduct of an annual survey and submission of an annual performance report which includes:

- number of preferential spaces
- number of car- and vanpoolers
- number of transit users
- location of bike racks

MANAGEMENT

Employer/Developer

Employee transportation coordinator responsible for plan implementation, information dissemination, conduct of information days, conduct of survey, liaison with City.

Jurisdiction

Administered by the zoning office. Requires two full-time equivalents:

- one-half of a supervisor
- one full-time planner
- one-half time clerical staff

FUNDING

General funds

ENFORCEMENT

Requires an approved TDM plan to receive a use permit. The zoning administrator can revoke a permit for noncompliance.

Incentives for compliance are reductions in the amount of required parking as follows:

- up to 8 percent for providing an on-site employee transportation coordinator
- up to an additional 11 percent upon approval of a traffic demand management plan by the city traffic and transportation engineer

Reductions are determined by the zoning administrator.

If goals of TDM plan are not met, a building proponent may be required to provide cash deposit to be held in escrow, or to set aside land for provision of deferred parking spaces.

RESULTS

No studies have been done to date.

COMMENTS

Use of a "carrot" approach for participation by employees and development of a partnership with business are key to having a successful program.

CONTACT

Mr. Doug Reilly, City of Pasadena, Public Works and Transportation Department,
(818) 405-4031

CASE STUDY
PIMA COUNTY, AZ

JURISDICTION

Pima County, City of Tucson, City of South Tucson, Town of Oro Valley, and Town of Marana, Arizona

ORDINANCE STATUS

Ordinances adopted in each of 5 jurisdictions during March and April 1988. County of Pima adopted its ordinance on April 12, 1988. Intergovernmental Agreement between 5 jurisdictions on April 18, 1988.

IMPETUS

Intergovernmental agreement and traffic reduction ordinances initiated by Pima Association of Governments in response to increasing traffic congestion and air pollution

GEOGRAPHIC COVERAGE

Includes incorporated and unincorporated areas of Pima County as well as City of Tucson, City of South Tucson, Town of Oro Valley, and Town of Marana. Does not include Indian Reservations within County which are sovran.

SCOPE

Applies to existing and new employers or groups of employers at single work site employing 100 or more employees (approximately 140 to 160 employers)

GOALS

Improve air quality and reduce traffic congestion by increasing alternate mode usage and reducing overall motor vehicle travel for commute trips

TARGET/STAGING

Employee participation in alternate modes or commuter trip vehicle miles of travel (VMT) reductions per worksite:

- Year 1 - 15%
- Year 2 - 20%
- Year 3 - 25%
- After 3rd year either:
 - 1% per year increase in employee participation in alternate modes until 40% of all commute trips are made by alternate modes; or
 - reduction in average annual VMT per employee of 1.5% per year after a 25% alternate mode or commuter trip VMT reduction is achieved

REQUIREMENTS

During each year of the regional program, each major employer (with 100 or more employees at a single work site) must:

- annually provide each employee (and all new employees at time of hiring) with information on alternate mode options and travel reduction measures including Sun Tran bus routes and schedules, the Rideshare program, and bicycle routes
- participate in a survey and reporting effort to form baseline for measuring progress in achievement of targets
- prepare and submit a Travel Reduction Plan containing the following:
 - name of designated Transportation Coordinator
 - description of employee information programs and other Travel Reduction Measures completed to date
 - description of Travel Reduction Measures to be undertaken in coming year, such as:
 - commuter matching service
 - provision of vans or company cars for vanpooling or carpooling
 - subsidized carpooling or vanpooling
 - preferential parking for carpool or vanpool users
 - cooperation with Sun Tran or other transportation providers to provide additional regular or express service to the work site
 - subsidized bus fares
 - construction of special loading facilities for transit and carpool or vanpool users
 - cooperation with local jurisdictions to construct walkways or bicycle routes to the work site
 - bicycle racks, lockers, and showers for employees who walk or bicycle to work
 - special information center for information on alternate modes and other travel reduction measures
 - work-at-home program
 - program of adjusted work hours
 - program of parking incentives
 - incentives to encourage employees to live closer to work

MANAGEMENT

Jurisdiction

Manager of Travel Reduction Program, Pima Association of Governments - full time position responsible for developing regional program implementation plan, implementing plan, developing survey tool, reviewing major employer's Travel Reduction Plans

Travel Reduction Program staff, Pima Association of Governments - up to 4 positions responsible for:

- providing assistance to employers in coordinating data collection, disseminating information, developing travel reduction plan, and increasing effectiveness of selected travel reduction measures

- coordinating training programs for employers
- coordinating survey and data collection activities and program monitoring with Task Force and Technical Advisory Committee
- developing implementation schedule for annual surveys

Regional Task Force

Task force is composed of 1 representative from each of the 5 jurisdictions, 10 members elected by the major employers, 2 owners of business parks, office buildings or shopping centers, and 2 public interest group representatives. Task Force is responsible for:

- reviewing responses by major employers to the annual survey
- reviewing Travel Reduction Programs for employers
- monitoring implementation of each Travel Reduction Plan
- acting as hearing board for variances
- reviewing the performance of the regional program annually
- at the end of the third year of the regional program, recommending to the local jurisdictions changes in their Travel Reduction Ordinances

Technical Advisory Committee

Technical Advisory Committee consisting of technical staff from participating jurisdictions will support the Regional Task Force primarily relative to survey design, data collection, and analysis

Major Employers

Transportation Coordinator designated by each major employer as lead person in developing and implementing a Travel Reduction Plan

FUNDING

Initially totally locally funded; however, in future may receive state funding since state passed bill in 1988 requiring counties of certain size to implement travel reduction programs

ENFORCEMENT

Violations subject to civil penalty include:

- failure to collect or supply information requested by Task Force
- failure to disseminate information
- failure to designate Transportation Coordinator

- failure to submit an satisfactory Travel Reduction Plan
- failure to implement an approved plan within time schedule

Failure to meet travel reduction goals shall not constitute a violation provided the major employer is attempting in good faith to meet the goals.

Violators are subject to civil penalty up to \$250 per each day of violation.

RESULTS

First group of employers will have completed whole cycle (1 year) by summer of 1989. Manager of Travel Reduction Program will then be able to assess preliminary results.

COMMENTS

Manager of Travel Reduction Program indicated that cooperation between public and private sectors was a real asset in getting the regional program going and in its ultimate success.

CONTACT

Ms. Marian Slavin, Manager Travel Reduction Program, Pima Association of Governments, (602) 792-1093

CASE STUDY
PLACER COUNTY, CA

JURISDICTION

Placer County, California

ORDINANCE STATUS

Adopted May 25, 1982

IMPETUS

Significant level of increase in new employment

ORDINANCE DEVELOPMENT

Developed as a regional effort by the South Placer Policy Committee comprised of elected representatives from Placer County and the cities of Roseville, Lincoln, and Rockland

GEOGRAPHIC COVERAGE

Unincorporated area in South Placer Housing Implementation Area

SCOPE

New and existing employers and developers

PEAK PERIOD

7:30 to 8:30 A.M. and 4:30 to 5:30 P.M.

GOALS

Reduce average number of vehicular trips for home-to-work commuting to 25 percent fewer than would occur if all such trips were made in single occupant motor vehicles

REQUIREMENTS

- 1) Employers and public institutions with 10 or more employees at common location must encourage ridesharing by:
 - posting informational materials (current schedules, rates and routes of mass transit service to facility, location of bicycle routes, ridesharing flyers)
 - disseminating annually to all employees, and to new employees when hired, written information regarding area-wide commuter rideshare matching service
- 2) New or existing employers who expand to 30-200 employees at one location shall voluntarily:
 - facilitate employees' use of rideshare program by designating a rideshare coordinator
 - establish preferential parking facilities for car and vanpools and provide parking for bicycles

- 3) Existing employers who expand in excess of 20 percent of baseline employment shall be subject to each of the above requirements
- 4) Developers applying for conditional use permit or industrial building permit for development that would employ 50-200 employees at common location should voluntarily submit a Transportation Plan including:
 - description of development (hours and peak hours of congestion)
 - estimation of commuting characteristics
 - mitigation measures designed to reduce vehicle trips that would occur if all home-to-work trips were made in single occupant vehicles by 20 percent, including:
 - subsidies or incentives for car or vanpool
 - payment of parking charge or absorption of vanpool operation costs
 - subsidies or incentives for transit use
 - provision of amenities (bicycle lockers, transit shelters, etc.)
 - showers and locker facilities for bicycle riders
 - vanpool program (vans, insurance)
 - shifting of vehicle trips from peak hour to non-peak period
- 5) Developers applying for conditional use permit, commercial or industrial building permit, or environmental review to allow activities that would employ >200 employees and existing employers who would exceed baseline employment by >20 percent must submit Transportation Plan including:
 - description of activity and operating characteristics
 - estimate of commuting characteristics of labor force
 - program to achieve a 30 percent reduction in all motor vehicle trips
- 6) Each employer subject to the requirement for a transportation program must submit a report to the Transportation coordinator each year describing the program (employers of less than 200 employees shall voluntarily submit report)

MANAGEMENT

Jurisdiction - Transportation Coordinator

ENFORCEMENT

- 1) If compliance with original mitigation measures specified in employer's Transportation Plan, adopted in the Conditional Use Permit or Building Permit, are not met, employer has 60 days to provide alternative plan to achieve objectives within 1 year
- 2) If alternative plan does not accomplish requirements, employer is subject to misdemeanor and civil penalty of \$500 per day until conditions are met (penalties collected are distributed to Placer County Road Fund)

CONTACT

Roger Imsdahl, Placer County, (916) 823-4673

CASE STUDY
PLEASANTON, CA

JURISDICTION

City of Pleasanton, CA

DEMOGRAPHICS

Population more than doubled over last 2 decades, from 18,328 in 1970 to estimated 45,400 in 1986. Employment increased from 9,090 in 1980 to estimated 18,500 in 1985.

ORDINANCE STATUS

Passed October 2, 1984; effective November 2, 1984

IMPETUS

Continued growth in County, and in particular, anticipation of rapid development of 7.3 million square foot commercial development, the Hacienda Business Park

ORDINANCE DEVELOPMENT

In early 1984, a citizens' General Plan Review Committee, after discovering that the county's transportation engineers assumed significant use of commute alternatives and flexible work hours in their studies, reviewed the concept of a trip reduction ordinance. The City's transportation staff, attorney, and representatives of developers and employers worked together over a 6 month period to draft the TSM ordinance.

GEOGRAPHIC COVERAGE

City-wide

SCOPE

New and existing employers and commercial/industrial complexes, including City government

GOALS

- Maintain peak hour level of service on city streets and intersections no worse than LOS C for as long as possible and exceed mid-LOS D only after 45% reduction in peak period employee commute trips is achieved
- Preclude peak hour LOS on City streets and intersections from reaching LOS E
- Reduce peak hour traffic volumes by employees by minimum of 45% through use of employer and complex developed TSM programs and traffic congestion.
- Maximize use of commute modes other than single occupant vehicles through cooperative development of city wide programs

- Minimize percentage of employees traveling to and from work at same time and during peak periods

TARGET/STAGING

Reduction of 45 percent in peak period employee commute trips (from that which would occur if all employees commuted to work in single-occupant vehicles):

- first year - 15 percent reduction
- second year - 25 percent reduction
- third year - 35 percent reduction
- fourth year - 45 percent reduction

REQUIREMENTS

- All existing and future employers - annually submit survey information to the City Transportation Systems Manager to establish commute pattern data and provide car and van pool matching information
- All employers of ten or more employees not located in complexes - design, implement and provide to the City Transportation Systems Manager a TSM Information Program for educating employees about commute options including posting and dissemination of informational materials pertaining to transit, ridesharing and non-vehicular commute modes
- All employers of fifty or more employees and all employers within complexes - design, implement, and provide to the City Transportation Systems Manager a TSM Program designed to achieve reductions in peak period traffic generated by its employees, including:
 - appointment of Workplace Coordinator
 - reasonable combination of TSM measures such as transit-related programs, ridesharing, non-vehicular commute modes, and alternative work hour programs
- Complexes - design, implement and provide to the City Transportation Systems Manager a TSM Program designed to achieve a 45 percent reduction in number of peak period vehicle trips that would occur if all employees travelled in single-occupancy vehicles during peak periods, including:
 - appointment of a Complex Coordinator
 - reasonable combination of TSM measures such as transit-related programs, ridesharing, non-vehicular commute modes, and alternative work hour programs

- a program for coordinating, monitoring and assisting the TSM Programs of complex employers
- Central Business District - appoint Downtown Coordinator to participate in TSM Task Force
- Each employer and complex required to have TSM Program - submit to the Transportation Systems Manager an annual report describing:
 - TSM Program and results
 - the program to be implemented in coming year

MANAGEMENT

TSM Task Force

- Purpose - to monitor congestion, establish guidelines for TSM programs, monitor results of employers' TSM programs, coordinate programs
- Composition - representative of each complex, representative of each employer of 100 employees or more, the Downtown Coordinator, the Pleasanton Transportation Systems Manager, and representative from each transit authority.

Jurisdiction

- Pleasanton Transportation Systems Manager - responsible for participating in TSM Task Force, collecting data, providing support to employers, reviewing and evaluating employers' TSM Programs and Information Programs, reviewing compliance with ordinance, coordinating with other departments and agencies, reporting to the City Council and TSM Task Force annually on results of programs

Employers

- Coordinators designated by each employer of 50 or more employees, all complexes and CBD - responsible for implementing TSM Program and participating in TSM Task Force

ENFORCEMENT

Failure to provide survey data, annual reports, and/or provide and implement TSM information programs and TSM programs (if applicable) is an infraction subject to fines as follows:

- 1st infraction - \$50
- 2nd infraction - \$100
- 3rd (or greater) infraction - \$250

Each failure constitutes a separate violation.

Failure to achieve staged TSM goals may result in:

- the Transportation System Manager requiring that revisions or additions be made to employer's TSM Program to achieve required reduction in peak period traffic
- the TSM Task Force requiring specific program elements be implemented to meet the trip reduction goals

Failure to comply with requirements to revise plan and implement additional TSM measures is a violation subject to civil penalty of \$250 per day until failure to comply is corrected.

RESULTS

In the fourth year of the ordinance, 102 employers implemented Transportation Information Programs and 68 large employers and complexes implemented TSM Programs.

Annual surveys indicate the following reductions in peak hour vehicle travel (from that which would have occurred if all employees commuted to work in single occupant vehicles):

- 1985 - 26%
- 1986 - 36%
- 1987 - 36%
- 1988 - 43%

Note that the peak hour vehicle trip reduction percentages assume that employees not responding to the survey (20%) drove alone.

For first time in 1988, the percentage of commuters driving alone decreased (to 84%) and the percentage of carpools and vanpools increased (12%). Survey data indicate that alternative work hours continue to effectively spread peak commute hours.

CONTACT

Gail Gilpin, Transportation Systems Manager, City of Pleasanton, (415) 847-8023

CASE STUDY
SACRAMENTO, CA
DEVELOPER ORDINANCE

JURISDICTION

City of Sacramento, CA

STATUS

Off-Street Parking and Transportation Systems Management Regulations, Section 6 of Comprehensive Zoning Ordinance, in draft

ORDINANCE DEVELOPMENT

City Council adopted Trip Reduction Regulation Ordinance on April 5, 1983, requiring Transportation Management Plans (TMP) for new non-residential developments which would accommodate 200 or more employees.

In May 1986, the City Council requested a revision to the 1983 Trip Reduction Ordinance as part of the North Natomas Community Plan to expand the program by phasing in current employers. In response, city staff developed draft employer TSM ordinance.

City staff also revised the 1983 Trip Reduction Regulation Ordinance to ensure consistency. Major changes include:

- goal changed from 15 percent (20 percent in some cases) trip reduction to 35 percent alternate mode travel
- scope redefined major employers from 200+ employees to 100+ employees and minor employers from 50 - 199 employees to 25 - 99 employees.

Ordinances must be acted on by City Council by end of December 1988.

GEOGRAPHIC COVERAGE

City-wide

SCOPE

Applies to new non-residential development as follows:

- Minor Projects - any development proposal expected to be primary place of business for 25 - 99 employees
- Major Projects - any development proposal expected to be primary place of business for 100 or more employees

Expansion resulting in structure being primary place of business for 25 - 99 employees or 100 or more employees will be considered minor project or major project, respectively.

GOALS

Involve developers in provision of facilities and framework for future TSM needs such that 35 percent of employees who commute during peak hours will arrive at worksite by means other than single occupant motor vehicle.

REQUIREMENTS

Minor Project

- provide facilities to post information 1) describing benefits of transit, ridesharing, and bicycling as commute modes, and 2) describing facilities, services, schedules, and rates

Major Project

- obtain Transportation Management Plan (TMP) permit:
 - compliance with information posting requirement of minor projects
 - preparation of TMP to provide facilities and framework for future TSM needs, which may include:
 - voluntary participation in existing or formation of new Transportation Management Association
 - provision of preferential parking for carpool/vanpool (minimum 10 percent) including minimum 50 percent discount if parking fees are imposed
 - agreement to construct or pay for construction of transit passenger shelter if development is located along an existing or designated transit route
 - agreement to pay all or part of cost of land, construction and/or maintenance of center/station if proposed development is located within 1320 feet of existing or designated bus transit center or light rail station
 - agreement to pay one-time transit operating subsidy to Sacramento RTD or other transit agency if proposed development is within 1320 feet of existing or designated bus route or light rail station
 - provision of 50 to 100 percent monthly transit pass subsidy if proposed development is within 1320 feet of existing or designated transit route
 - establishment and subsidization of all or part of a buspool or shuttle bus service operated individually or by contract with public or private transit agency
 - purchase, lease, or otherwise subsidize capital and/or operating cost of vanpools used by future employees at development.
 - provision of showers and locker facilities for employees to encourage bicycle commuting
 - any other measure which will result in use of alternate travel mode

OPTIONS

Any development project subject to ordinance requirements will be eligible for reduction in amount of required parking

FUNDING

Filing fee for TMP permit, specified by resolution of City Council

ENFORCEMENT

Enforcement not specified in current draft of ordinance; planned for next draft

CONTACT

John Presleigh, City of Sacramento, (916) 449-2192

CASE STUDY
SACRAMENTO, CA
EMPLOYER ORDINANCE

JURISDICTION

City of Sacramento, CA

STATUS

Employer Transportation Systems Management Ordinance in draft

ORDINANCE DEVELOPMENT

City Council adopted Trip Reduction Regulation Ordinance on April 5, 1983, requiring Transportation Management Plans (TMP) for new non-residential developments which would accommodate 200 or more employees.

In May 1986, the City Council requested a revision to the 1983 Trip Reduction Ordinance as part of the North Natomas Community Plan to expand the program by phasing in current employers. In response, city staff developed draft employer TSM ordinance.

GEOGRAPHIC COVERAGE

City-wide

SCOPE

New and existing employers

GOALS

Reduce peak hour traffic and congestion by decreasing the number of single-occupant motor vehicle trips associated with commuting. Specifically, establish program so that 35% of employees who commute during peak hours will arrive at worksite by means other than single occupant motor vehicle.

REQUIREMENTS

Major Employers (employing 100 or more employees at worksite) must:

- submit a Transportation Management Plan (TMP) and obtain a Transportation Management Certificate. The TMP must:
 - designate a Transportation Management Coordinator responsible for implementing program
 - provide all employees annually with written information on alternate modes, including carpool, vanpool, public transit, bicycle and walking
 - provide all employees annually with computer matching services
 - provide preferential parking for car and vanpool vehicles
- annually renew the Transportation Management Certificate:
 - if information indicates employer achieved 45% alternative mode trip goal, TMC will be renewed
 - if 35% alternate mode trip goal not achieved, employer must amend the TMP to include additional trip reduction measures

Minor Employers (employing 25 - 99 employees) must post information describing benefits of transit, ridesharing and bicycling as commute modes and describing facilities, services, schedules, and rates

MANAGEMENT

Jurisdiction

City Traffic Engineer

Employers

Transportation Management Coordinator responsible for submitting annual information

FUNDING

Fees assessed for issuance and renewal of TMC. Fees collected will be used to defray costs of administration, monitoring, and enforcement of ordinance

ENFORCEMENT

Failure to submit approved TMP, failure to implement TSM measures, and failure to renew TMC will be considered infractions, subject to penalties established by annual resolution of the City Council

CONTACT

John Presleigh, City of Sacramento, (916) 449-2192

CASE STUDY
SAN BUENAVENTURA, CA

JURISDICTION

San Buenaventura, California

DEMOGRAPHICS

Population: 90,000

ORDINANCE STATUS

Adopted July 1988

IMPETUS

1985 election made traffic a key issue

Increasing traffic congestion

GEOGRAPHIC COVERAGE

Arundel office/commercial/retail area with large amounts of vacant land. Area covers 763 acres.

SCOPE

Applies to new or expanding non-residential developments that require discretionary approval.

ORDINANCE DEVELOPMENT

The city had a moratorium on development that would increase traffic at 37 critical intersections by one percent. The city replaced the moratorium with a traffic mitigation fee ordinance and a transportation demand ordinance. Developers supported both ordinances in exchange for dropping the moratorium.

GOALS

Preserve and enhance mobility and air quality within the city.

TARGET/STAGING

Peak period "participation" by 55 percent of employees at a site in one of the following:

- carpools/vanpools
- transit
- bike
- walk
- flex-time

The schedule requires that:

- 50 percent of the goal be met within six months of occupancy
- 100 percent of the goal be met within 18 months of occupancy

HOURS

4-6 pm

REQUIREMENTS

Appointment of a transportation coordinator.

Preparation of a traffic management plan following city guidelines by all new developments to encourage use of carpools, vanpools, transit, bicycles, walking, alternate work hour programs, and non-peak period travel.

Submission of a six-month report which will include a milestone survey to determine the percentage of peak period work force driving alone and a breakdown by hour and mode of how the remainder of the total site work force is commuting.

Submission of monitoring reports beginning a year after the six-month report following the city-specified format. The report shall include:

- employee survey results
- viable estimate of current modes
- comparison to the previous year's performance
- description of measures and incentives
- further actions

For those not meeting the ordinance goals, submission of the monitoring report is required annually. For those meeting ordinance goals, submission is required every two years.

A triennial performance audit by an independent auditor is required to identify further opportunities available to the employer's or owner's program.

Use of a combination of the following steps if the goal is not met:

- mandatory or increased charges for employee parking
- preferential parking for car- and vanpools and assignment of only 45 percent of parking spaces for single occupant vehicles
- choice between cash payments or parking permits
- direct financial incentives for alternative modes and non-peak hour travel

MANAGEMENT

Employer/Developer

On-site transportation coordinator

Jurisdiction

City has one planner dedicated part-time to the program housed in the public works department. Are planning on expanding the staff resources dedicated to program.

FUNDING

General revenues and plan filing fees as follows:

- Tier I worksites \$50
- Tier II worksites \$250

ENFORCEMENT

Requires submission and acceptance of a traffic management plan to receive non-residential discretionary land use permits.

Requires stronger incentives if participation rate is not met and levies in-lieu fees if 100 percent of the goal is not met after a six-month grace period. In lieu fees will be placed in special fund to be used for TDM measures.

Bonuses in the form of participation rate credits may be awarded for demonstrating leadership in area traffic demand management efforts and for sponsoring "creative" vanpool and transit programs.

RESULTS

No studies have been done to date. The ordinance has been in effect less than a year.

COMMENTS

The current ordinance is temporary until the city develops a new city-wide ordinance that will apply to new and existing developments. The implementation of the city-wide ordinance is pending completion of an area wide survey to establish baseline commuting habits. The city-wide ordinance will be implemented in phases with employers with 100 or more employees subject to its requirements when the ordinance becomes effective and employers with 25-100 employees to be subject to requirements 1 year later.

City also has a traffic mitigation fee ordinance, adopted in 1986, which requires all new developments determined to generate additional peak hour trips to pay a traffic mitigation fee to upgrade the traffic circulation system.

CONTACT

Mr. Navir Lalani, City of San Buenaventura, (805) 654-7800

CASE STUDY
SAN RAFAEL, CA

JURISDICTION

San Rafael, California

DEMOGRAPHICS

Population: 45,000

Employment in special use area: 40,000

ORDINANCE STATUS

Adopted July 1983 as part of general land use plan.

GEOGRAPHIC COVERAGE

Northgate activity center overlay district

SCOPE

Applies to all developments and uses that are projected to generate traffic above the allocation in the general land use plan in the Northgate activity center overlay district. Developers or users may either take steps to increase capacity or to reduce demand.

ORDINANCE DEVELOPMENT

General land use plan was developed by the city.

GOALS

Maintain level of Service D for street operation in the Northgate Activity Center.

TARGET/STAGING

The number of pm peak period trips is limited to those allocated to a parcel by the city's area plan. The pm peak period trip allowances are based on use and are:

- small-unit residential: .7 trips per unit
- large-unit residential: 1.1 trips per unit
- general office: 2.6 trips per 1000 square feet
- industrial: 1 trip per 1000 square feet
- retail: 3.3 trips per 1000 square feet
- major retail: 8.3 trips per 1000 square feet
- hospital: 1.3 trips per bed

- theater: 1.6 trips per 100 seats
- medical offices: 5 trips per 1000 square feet

HOURS

Allowances apply to the pm peak

REQUIREMENTS

Requires participation in annual use permit review.

Levies transportation improvement fees for each development project that increases pm peak hour trips to pay for its prorated share of designated road construction and signalization projects needed to maintain LOS D.

MANAGEMENT

Employer/Developer

Require employers over a certain level of employment to provide of a transportation system management coordinator.

Jurisdiction

Under purview of zoning office. Assisted by traffic engineer in Department of Public Works.

FUNDING

General funds

ENFORCEMENT

Issuance of building permit subject to applicant's demonstration that transportation improvements will be fully funded.

City will require land use permit holder to take additional steps if traffic allocation is exceeded.

RESULTS

Have conditioned 10 or 11 permits on trips. All have met goals except two which are unique land uses. All of those that have met the goals are office uses.

CONTACT

Mr. John Rumsey, City of San Rafael, Department of Public Works, (415) 485-3355

CASE STUDY
SEATTLE, WA
CBD ORDINANCE

JURISDICTION

City of Seattle, Washington

STATUS

Land Use Code revised 1985

DEVELOPMENT

State passed legislation in 1979, the State Environmental Policy Act (SEPA) which gave jurisdictions state authority to impose conditions on developers where warranted by poor air quality. City adopted Director's Rule in 1981 formalizing City's program requirements authorized under SEPA. The Land Use Code was rewritten in 1985, replacing the Director's Rule.

SCOPE

Applies to new and existing developments with greater than 10,000 square feet (approximately 20 developments)

GEOGRAPHIC COVERAGE

Central Business District

GOALS

To mitigate traffic and parking impacts of proposed development by reducing the number of peak period single occupant vehicle (SOV) trips associated with new and existing development within the city.

REQUIREMENTS

Affected developers/property managers must:

- Designate a Transportation Coordinator responsible for administering and promoting the transportation management program
- Implement a carpool program providing 20 percent of long-term parking for carpools (2 or more people)
 - if there is a parking fee, property managers provide 30 percent discount for carpools
 - if no charge for parking, property managers provide preferential parking for carpools between 7 and 10 A.M.
- Construct a commuter information center in building common area (lobby, cafeteria, etc.) to display transit and ridesharing information
- Implement strategies to reduce peak period SOV use, such as:
 - higher parking fees for SOVs
 - parking management techniques
 - high occupancy vehicle (HOV) operation cost subsidies

- carpool bonuses
 - transit pass subsidies
 - vanpool sponsorship
 - reduced parking costs for HOVs
 - street and site improvements
 - subscription bus service
 - flex-time work schedules
- Conduct semi-annual promotions of the transportation management program with assistance of METRO and the City (range from 2 hour to full day commuter fairs)
 - Annually distribute employee survey to collect information on commuting
 - Prepare and submit quarterly reports to the City noting the number of carpools, number of vanpools, and the transit subsidies if applicable

Developers may meet the minimum parking requirements through payment to the Downtown Parking Fund if the City determines that the parking impacts of the development can be met by other means.

MANAGEMENT

Jurisdiction

Program is managed by the Program Information Coordinator who is responsible for conducting and tabulating employee survey, serving as liaison between City and developers, providing assistance to developers/property managers particularly in program promotion, monitoring compliance with requirements and initiating enforcement action. Two administrative staff members assist the Program Information Coordinator. Occasionally, staff is augmented with interns from local university.

Developers/Property Managers

Each developer or property manager designates a Transportation Coordinator to implement, administer and market the transportation management program, conduct the annual survey of employees to determine commute mode percentages, disseminate ridesharing information to building occupants, and aid in evaluation and monitoring of the ridesharing program.

FUNDING

Program is funded through City's general fund and FHWA Federal Aid to Urban Systems.

ENFORCEMENT

Building use permit will not be issued until developer prepares transportation management plan.

Mitigation strategies may be added, revised or deleted as specified in the conditions or approval if the TMP strategies are not making satisfactory progress to meeting goals or if the goals are exceeded.

Violations of conditions of permit are enforced by the Department of Construction and Land Use. Penalties could involve:

- revocation of occupancy permit
- fine of \$75 per each day of violation

To date, enforcement action has not been taken. Program Information Coordinator is currently initiating enforcement action on several property owners.

COMMENTS

SEPA gave jurisdictions the authority to establish performance standards. However, the revised Land Use Code eliminated that authority.

CONTACT

Elizabeth Rankin, Program Information Coordinator, Engineering Department, City of Seattle, (206) 684-0818

CASE STUDY
SEATTLE, WA
MAJOR INSTITUTIONS ORDINANCE

JURISDICTION

City of Seattle, Washington

STATUS

Major Institutions Ordinance, adopted 1983

SCOPE

Applies to new and existing major institutions such as hospitals and universities

GEOGRAPHIC COVERAGE

outside Central Business District

GOAL

50% reduction in single occupant vehicle (SOV) commute trips

REQUIREMENTS

When applying for a Master Use Permit, a major institution must demonstrate an administrative and financial commitment to a transportation management program (TMP) designed to reduce the percentage of employees who commute to work by SOV. The TMP must include:

- designation of a transportation coordinator responsible for the transportation management program
- a transportation management program which may include one or more of the following measures:
 - carpooling
 - higher SOV parking rates
 - vanpooling
 - transit information center (schedule rack)
 - transit subsidies
 - subscription bus passes
 - covered bicycle parking
 - bicycle lockers or shower facilities
 - other measures designed to reduce SOV commute trips
- indication of the administrative form the transportation management program will take (i.e., contractual agreement with public ride-sharing agency or private equivalent, or in-house administration)

Major institutions must meet specified minimum parking requirements and may not exceed 135 percent more than the minimum parking requirements unless a special exception is granted.

Major institutions must meet the following development standard for parking:

- long-term parking
 - preferential, guaranteed spaces for carpools and vanpools, with substantially lower parking rates than for SOV
 - charge for all non-carpool/vanpool long-term parking spaces
- bicycle parking
 - provided in convenient, covered location
 - racks designed to accommodate locking of the bicycle frame and both wheels

OPTIONS

A reduction in the minimum number of spaces may be permitted as a special exception if the City determines that the major institution will provide sufficient financial and administrative support to ensure that the reduction in spaces will be compensated by increases in carpooling, transit use, or other means of alternative transportation.

Provision of parking spaces in excess of 135 percent of the minimum requirements may be permitted as a special exception based on evidence of parking demand and opportunities for alternative means of transportation. If the exception is granted, the goal for decreasing SOV commuters would be modified.

MANAGEMENT

Jurisdiction

Program is managed by the Program Information Coordinator within the city's Engineering Department

Major Institutions

Transportation Coordinator responsible for each institution's transportation management program

ENFORCEMENT

If an institution is proposing new development and substantial progress is not being made, the City may:

- require additional steps be taken to effect compliance with the program
- require additional measures to encourage alternative means of transportation for travel generated by the proposed new development
- deny the permit

RESULTS

Majority of institutions have developed transportation management programs although some institutions do not yet have a signed memorandum of agreement with the City.

CONTACT

Elizabeth Rankin, Program Information Coordinator, City of Seattle, (206) 684-0818

CASE STUDY
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
REGULATION XV
LOS ANGELES, CA

JURISDICTION

South Coast Air Quality Management District (SCAQMD), California

STATUS

Regulation XV, Commuter Program, adopted December 11, 1987 and implemented July 1, 1988

GEOGRAPHIC COVERAGE

South Coast Air Basin comprised of Los Angeles, Orange, and Riverside counties and the non-desert portion of San Bernardino County

IMPETUS

Currently, for more than half of each year, air quality in this area fails to achieve federal health standards. By 2010, the Southern California Association of Governments (SCAG) estimates there will be an additional 5.5 million people and 3 million jobs in the area, resulting in a 42% increase in traffic.

DEVELOPMENT

Cooperative seven-month effort between SCAQMD and 12 member Trip Reduction Advisory Committee comprised of SCAQMD Board members, Los Angeles Chamber of Commerce, Automobile Club of Southern California, Los Angeles Central City Association, UCLA's Urban Planning Department, Atlantic Richfield Co., Disneyland, and Irvine Company

SCOPE

Regulation applies to all employers of 100 or more employees at a single work site. Requirements will be phased in over 30 months as follows:

- July 1, 1988 - employers who employ 500 or more
- January 1, 1989 - employers who employ 200 to 499
- January 1, 1990 - employers who employ 100 to 199

Approximately 8000 employers will be affected.

Employers subject to a City or County ordinance which requires implementation of trip reduction measures, if as stringent as Regulation XV, will be exempt from Regulation XV.

GOALS

Goal is to reduce air pollution by reducing the number of car trips taken between home and work during 6 A.M. to 10 A.M. in the South Coast Air Basin, as measured by Average Vehicle Ridership (employee population reporting to work weekdays between 6 and 10 A.M. divided by number of vehicles driven). Average Vehicle Ridership (AVR) targets are 1.3, 1.5 or 1.75 depending on the

area (based on the number of people employed per square mile). AVR was 1.13 when Regulation 15 was adopted.

REQUIREMENTS

- Prepare and submit Trip Reduction Plan to District within 90 days of notice including:
 - verifiable estimate of existing AVR
 - inventory of current measures to achieve increases in AVR
 - Designation of trained Transportation Coordinator to be responsible for plan implementation
 - list of incentives expected to lead to achievement of target AVR within 12 months, such as:
 - financial incentives for ridesharing
 - establishment of carpool, buspool, or vanpool programs
 - subsidization of parking for ridesharing employees
 - subsidization of carpools, vanpools, buspools, shuttles, or use of public transit
 - allowance for employees to use company-owned vehicles for ridesharing purposes
 - preferential parking for ridesharing vehicles
 - preferential access and/or egress for ridesharing employees
 - amenities to encourage use of bicycles (showers, racks)
 - active use of computerized rideshare matching service
 - compressed work weeks
 - flexible work hours that facilitate employee ridesharing
 - telecommuting or work at home
- Review implementation plan, update and resubmit annually

MANAGEMENT

Jurisdiction

SCAQMD Transportation Programs Manager is responsible for notifying employers of requirements, and reviewing and approving/disapproving trip reduction plans submitted by employers.

SCAQMD staff (approximately 15) provide limited technical assistance to employers in plan development and implementation

Employers

Transportation Coordinator responsible for plan development and implementation

ENFORCEMENT

Failure to submit plan, submit annual update, or offer an incentive in an approved plan is a violation of California Health and Safety Code, subject to penalty of up to \$1000 fine and/or 6 months in jail for each day of violation.

Failure to meet AVR target specified is not violation provided employer complies with all provisions of approved plan.

FUNDING

Fees were designed to cover cost. Current fees (subject to change) are:

- \$125 per worksite with initial plan
- \$50 per worksite with annual plan update

SCAQMD is funded 80% with fees and fines, and 20% with Federal and State grants.

COMMENTS

Regulation XV replaced District's Emergency Episode Program/ Regulation VII, which had been in effect for 2 decades and required that certain employers and educational institutions promote voluntary ridesharing during air pollution episodes.

CONTACT

Chris Nelson, Transportation Management Coordinator, South Coast Air Quality Management District, (818) 572-6433

V. REFERENCES

Draft Transportation System Management Policy Guidelines, METRO and PSCOG, September 1988.

Key Considerations for Developing Local Government TSM Programs, Susan Pultz, Metropolitan Transportation Commission, March 1988.

Model Transportation System Management Ordinance for Local Jurisdictions, PSCOG and METRO, July 1986.

Prototype Transportation/Land Use Ordinance and Report, Southern California Association of Governments, October 20, 1986.

Traffic Mitigation and Demand Management, Summary of National Experience and Potential Applications in New York, U.S. Department of Transportation, July 1987.



NOTICE

This document is disseminated under the sponsorship of the U.S. Department of Transportation in the interest of information exchange. The United States Government assumes no liability for its contents or use thereof.

The United States Government does not endorse manufacturers or products. Trade names appear in the document only because they are essential to the content of the report.

This report is being distributed through the U.S. Department of Transportation's Technology Sharing Program.

DOT-T-90-06

DOT LIBRARY



00399606

TECHNOLOGY SHARING

A Program of the U.S. Department of Transportation